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<110> Brad St. Croix  
Bert Vogelstein  
Kenneth Kinzler

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 <212> PRT  
 <213> Homo sapiens

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 Ser Cys Tyr Ala Leu Phe Pro Arg Arg Arg Thr Phe Leu Glu Ala Trp  
 35 40 45  
 Arg Ala Cys Arg Glu Leu Gly Gly Asp Leu Ala Thr Pro Arg Thr Pro  
 50 55 60





545                      550                      555                      560  
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 Thr Gln Ala Thr Gln Leu Pro Ile Ile Pro Thr Ala Gln Pro Ser Leu  
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 Thr Thr Thr Ser Arg Ser Pro Val Ser Pro Ala His Gln Ile Ser Val  
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 Pro Ala Ala Thr Gln Pro Ala Ala Leu Pro Thr Leu Leu Pro Ser Gln  
                                  610                      615                      620  
 Ser Pro Thr Asn Gln Thr Ser Pro Ile Ser Pro Thr His Pro His Ser  
 625                      630                      635                      640  
 Lys Ala Pro Gln Ile Pro Arg Glu Asp Gly Pro Ser Pro Lys Leu Ala  
                                  645                      650                      655  
 Leu Trp Leu Pro Ser Pro Ala Pro Thr Ala Ala Pro Thr Ala Leu Gly  
                                  660                      665                      670  
 Glu Ala Gly Leu Ala Glu His Ser Gln Arg Asp Asp Arg Trp Leu Leu  
                                  675                      680                      685  
 Val Ala Leu Leu Val Pro Thr Cys Val Phe Leu Val Val Leu Leu Ala  
                                  690                      695                      700  
 Leu Gly Ile Val Tyr Cys Thr Arg Cys Gly Pro His Ala Pro Asn Lys  
 705                      710                      715                      720  
 Arg Ile Thr Asp Cys Tyr Arg Trp Val Ile His Ala Gly Ser Lys Ser  
                                  725                      730                      735  
 Pro Thr Glu Pro Met Pro Pro Arg Gly Ser Leu Thr Gly Val Gln Thr  
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 Cys Arg Thr Ser Val  
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 <211> 278  
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<400> 178  
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                                  20                      25                      30  
 Arg Met Val Val Leu Gly Ala Ser Arg Val Gly Lys Ser Ser Ile Val  
                                  35                      40                      45  
 Ser Arg Phe Leu Asn Gly Arg Phe Glu Asp Gln Tyr Thr Pro Thr Ile  
 50                      55                      60  
 Glu Asp Phe His Arg Lys Val Tyr Asn Ile Arg Gly Asp Met Tyr Gln  
 65                      70                      75                      80  
 Leu Asp Ile Leu Asp Thr Ser Gly Asn His Pro Phe Pro Ala Met Arg  
                                  85                      90                      95  
 Arg Leu Ser Ile Leu Thr Gly Asp Val Phe Ile Leu Val Phe Ser Leu  
                                  100                      105                      110  
 Asp Asn Arg Glu Ser Phe Asp Glu Val Lys Arg Leu Gln Lys Gln Ile  
                                  115                      120                      125  
 Leu Glu Val Lys Ser Cys Leu Lys Asn Lys Thr Lys Glu Ala Ala Glu  
                                  130                      135                      140  
 Leu Pro Met Val Ile Cys Gly Asn Lys Asn Asp His Gly Glu Leu Cys  
 145                      150                      155                      160  
 Arg Gln Val Pro Thr Thr Glu Ala Glu Leu Leu Val Ser Gly Asp Glu  
                                  165                      170                      175  
 Asn Cys Ala Tyr Phe Glu Val Ser Ala Lys Lys Asn Thr Asn Val Asp  
                                  180                      185                      190  
 Glu Met Phe Tyr Val Leu Phe Ser Met Ala Lys Leu Pro His Glu Met  
                                  195                      200                      205  
 Ser Pro Ala Leu His Arg Lys Ile Ser Val Gln Tyr Gly Asp Ala Phe

210	215	220
His Pro Arg Pro Phe Cys Met Arg Arg Val Lys Glu Met Asp Ala Tyr		
225	230	235
Gly Met Val Ser Pro Phe Ala Arg Arg Pro Ser Val Asn Ser Asp Leu		
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Lys Tyr Ile Lys Ala Lys Val Leu Arg Glu Gly Gln Ala Arg Glu Arg		255
	260	265
Asp Lys Cys Thr Ile Gln		270
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<210> 179  
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<400> 179
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35 40 45
Arg Glu Ser Pro Gly His Val Ser Glu Pro Asp Arg Thr Gln Leu Ser
50 55 60
Gln Asp Leu Gly Gly Gly Thr Leu Ala Met Asp Thr Leu Pro Asp Asn
65 70 75 80
Arg Thr Arg Val Val Glu Asp Asn His Ser Tyr Tyr Val Ser Arg Leu
85 90 95
Tyr Gly Pro Ser Glu Pro His Ser Arg Glu Leu Trp Val Asp Val Ala
100 105 110
Glu Ala Asn Arg Ser Gln Val Lys Ile His Thr Ile Leu Ser Asn Thr
115 120 125
His Arg Gln Ala Ser Arg Val Leu Ser Phe Asp Phe Pro Phe Tyr
130 135 140
Gly His Pro Leu Arg Gln Ile Thr Ile Ala Thr Gly Gly Phe Ile Phe
145 150 155 160
Met Gly Asp Val Ile His Arg Met Leu Thr Ala Thr Gln Tyr Val Ala
165 170 175
Pro Leu Met Ala Asn Phe Asn Pro Gly Tyr Ser Asp Asn Ser Thr Val
180 185 190
Val Tyr Phe Asp Asn Gly Thr Val Phe Val Val Gln Trp Asp His Val
195 200 205
Tyr Leu Gln Gly Trp Glu Asp Lys Gly Ser Phe Thr Phe Gln Ala Ala
210 215 220
Leu His His Asp Gly Arg Ile Val Phe Ala Tyr Lys Glu Ile Pro Met
225 230 235 240
Ser Val Pro Glu Ile Ser Ser Ser Gln His Pro Val Lys Thr Gly Leu
245 250 255
Ser Asp Ala Phe Met Ile Leu Asn Pro Ser Pro Asp Val Pro Glu Ser
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Thr	Pro</														

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<210> 182  
 <211> 2535  
 <212> DNA  
 <213> Mus musculus

<400> 182

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 <211> 2833  
 <212> DNA  
 <213> Mus musculus

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 <211> 2009  
 <212> DNA  
 <213> Mus musculus

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 <211> 5220  
 <212> DNA  
 <213> Mus musculus

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<210> 187  
 <211> 564  
 <212> PRT  
 <213> Homo sapiens

<400> 187

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Glu	Asp	Gly	Gly	Pro	Ala	Cys	Tyr	Gly	Gly	Phe	Asp	Leu	Tyr	Phe	Ile
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Leu	Asp	Lys	Ser	Gly	Ser	Val	Leu	His	His	Trp	Asn	Glu	Ile	Tyr	Tyr
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Phe	Val	Glu	Gln	Leu	Ala	His	Lys	Phe	Ile	Ser	Pro	Gln	Leu	Arg	Met
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Ser	Phe	Ile	Val	Phe	Ser	Thr	Arg	Gly	Thr	Thr	Leu	Met	Lys	Leu	Thr
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Glu	Asp	Arg	Glu	Gln	Ile	Arg	Gln	Gly	Leu	Glu	Glu	Leu	Gln	Lys	Val
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Leu	Pro	Gly	Gly	Asp	Thr	Tyr	Met	His	Glu	Gly	Phe	Glu	Arg	Ala	Ser
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Glu	Gln	Ile	Tyr	Tyr	Glu	Asn	Arg	Gln	Gly	Tyr	Arg	Thr	Ala	Ser	Val
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Ile	Ile	Ala	Leu	Thr	Asp	Gly	Glu	Leu	His	Glu	Asp	Leu	Phe	Phe	Tyr
				150						155				160	
Ser	Glu	Arg	Glu	Ala	Asn	Arg	Ser	Arg	Asp	Leu	Gly	Ala	Ile	Val	Tyr
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Cys	Val	Gly	Val	Lys	Asp	Phe	Asn	Glu	Thr	Gln	Leu	Ala	Arg	Ile	Ala
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Asp	Ser	Lys	Asp	His	Val	Phe	Pro	Val	Asn	Asp	Gly	Phe	Gln	Ala	Leu
		195					200					205			
Gln	Gly	Ile	Ile	His	Ser	Ile	Leu	Lys	Lys	Ser	Cys	Ile	Glu	Ile	Leu
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Ala	Ala	Glu	Pro	Ser	Thr	Ile	Cys	Ala	Gly	Glu	Ser	Phe	Gln	Val	Val
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Val Arg Gly Asn Gly Phe Arg His Ala Arg Asn Val Asp Arg Val Leu  
 245 250 255  
 Cys Ser Phe Lys Ile Asn Asp Ser Val Thr Leu Asn Glu Lys Pro Phe  
 260 265 270  
 Ser Val Glu Asp Thr Tyr Leu Leu Cys Pro Ala Pro Ile Leu Lys Glu  
 275 280 285  
 Val Gly Met Lys Ala Ala Leu Gln Val Ser Met Asn Asp Gly Leu Ser  
 290 295 300  
 Phe Ile Ser Ser Ser Val Ile Ile Thr Thr Thr His Cys Ser Asp Gly  
 305 310 315 320  
 Ser Ile Leu Ala Ile Ala Leu Leu Ile Leu Phe Leu Leu Leu Ala Leu  
 325 330 335  
 Ala Leu Leu Trp Trp Phe Trp Pro Leu Cys Cys Thr Val Ile Ile Lys  
 340 345 350  
 Glu Val Pro Pro Pro Pro Ala Glu Glu Ser Glu Glu Glu Asp Asp Asp  
 355 360 365  
 Gly Leu Pro Lys Lys Lys Trp Pro Thr Val Asp Ala Ser Tyr Tyr Gly  
 370 375 380  
 Gly Arg Gly Val Gly Gly Ile Lys Arg Met Glu Val Arg Trp Gly Glu  
 385 390 395 400  
 Lys Gly Ser Thr Glu Glu Gly Ala Lys Leu Glu Lys Ala Lys Asn Ala  
 405 410 415  
 Arg Val Lys Met Pro Glu Gln Glu Tyr Glu Phe Pro Glu Pro Arg Asn  
 420 425 430  
 Leu Asn Asn Asn Met Arg Arg Pro Ser Ser Pro Arg Lys Trp Tyr Ser  
 435 440 445  
 Pro Ile Lys Gly Lys Leu Asp Ala Leu Trp Val Leu Leu Arg Lys Gly  
 450 455 460  
 Tyr Asp Arg Val Ser Val Met Arg Pro Gln Pro Gly Asp Thr Gly Arg  
 465 470 475 480  
 Cys Ile Asn Phe Thr Arg Val Lys Asn Asn Gln Pro Ala Lys Tyr Pro  
 485 490 495  
 Leu Asn Asn Ala Tyr His Thr Ser Ser Pro Pro Pro Ala Pro Ile Tyr  
 500 505 510  
 Thr Pro Pro Pro Pro Ala Pro His Cys Pro Pro Pro Pro Ser Ala  
 515 520 525  
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 530 535 540  
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 Arg Pro Ser Val

<210> 188  
 <211> 1331  
 <212> PRT  
 <213> Homo sapiens

<400> 188  
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 Ser Ile Arg Ser Cys Lys Cys Ser Gly Glu Arg Pro Lys Gly Leu Ser  
 35 40 45  
 Gly Gly Val Pro Gly Pro Ala Arg Arg Arg Val Val Cys Ser Gly Gly  
 50 55 60  
 Asp Leu Pro Glu Pro Pro Glu Pro Gly Leu Leu Pro Asn Gly Thr Val  
 65 70 75 80  
 Thr Leu Leu Leu Ser Asn Asn Lys Ile Thr Gly Leu Arg Asn Gly Ser  
 85 90 95

Phe	Leu	Gly	Leu	Ser	Leu	Leu	Glu	Lys	Leu	Asp	Leu	Arg	Asn	Asn	Ile
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Phe	Ser	Ser	Leu	Gln	Pro	Gly	Val	Phe	Asp	Glu	Leu	Pro	Ala	Leu	Lys
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Val	Val	Asp	Leu	Gly	Thr	Glu	Phe	Leu	Thr	Cys	Asp	Cys	His	Leu	Arg
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Trp	Leu	Leu	Pro	Trp	Ala	Gln	Asn	Arg	Ser	Leu	Gln	Leu	Ser	Glu	His
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Thr	Leu	Cys	Ala	Tyr	Pro	Ser	Ala	Leu	His	Ala	Gln	Ala	Leu	Gly	Ser
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His	His	Leu	Ile	Pro	Ser	Leu	Arg	Gln	Val	Val	Phe	Gln	Gly	Asp	Arg
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Leu	Pro	Phe	Gln	Cys	Ser	Ala	Ser	Tyr	Leu	Gly	Asn	Asp	Thr	Arg	Ile
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Arg	Trp	Tyr	His	Asn	Arg	Ala	Pro	Val	Glu	Gly	Asp	Glu	Gln	Ala	Gly
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Ile	Leu	Leu	Ala	Glu	Ser	Leu	Ile	His	Asp	Cys	Thr	Phe	Ile	Thr	Ser
	290					295					300				
Glu	Leu	Thr	Leu	Ser	His	Ile	Gly	Val	Trp	Ala	Ser	Gly	Glu	Trp	Glu
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Cys	Thr	Val	Ser	Met	Ala	Gln	Gly	Asn	Ala	Ser	Lys	Lys	Val	Glu	Ile
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Val	Val	Leu	Glu	Thr	Ser	Ala	Ser	Tyr	Cys	Pro	Ala	Glu	Arg	Val	Ala
		340						345					350		
Asn	Asn	Arg	Gly	Asp	Phe	Arg	Trp	Pro	Arg	Thr	Leu	Ala	Gly	Ile	Thr
		355					360					365			
Ala	Tyr	Gln	Ser	Cys	Leu	Gln	Tyr	Pro	Phe	Thr	Ser	Val	Pro	Leu	Gly
	370					375					380				
Gly	Gly	Ala	Pro	Gly	Thr	Arg	Ala	Ser	Arg	Arg	Cys	Asp	Arg	Ala	Gly
385					390					395					400
Arg	Trp	Glu	Pro	Gly	Asp	Tyr	Ser	His	Cys	Leu	Tyr	Thr	Asn	Asp	Ile
			405						410					415	
Thr	Arg	Val	Leu	Tyr	Thr	Phe	Val	Leu	Met	Pro	Ile	Asn	Ala	Ser	Asn
		420					425						430		
Ala	Leu	Thr	Leu	Ala	His	Gln	Leu	Arg	Val	Tyr	Thr	Ala	Glu	Ala	Ala
	435					440						445			
Ser	Phe	Ser	Asp	Met	Met	Asp	Val	Val	Tyr	Val	Ala	Gln	Met	Ile	Gln
	450					455					460				
Lys	Phe	Leu	Gly	Tyr	Val	Asp	Gln	Ile	Lys	Glu	Leu	Val	Glu	Val	Met
465					470					475					480
Val	Asp	Met	Ala	Ser	Asn	Leu	Met	Leu	Val	Asp	Glu	His	Leu	Leu	Trp
				485					490					495	
Leu	Ala	Gln	Arg	Glu	Asp	Lys	Ala	Cys	Ser	Arg	Ile	Val	Gly	Ala	Leu
		500						505					510		
Glu	Arg	Ile	Gly	Gly	Ala	Ala	Leu	Ser	Pro	His	Ala	Gln	His	Ile	Ser
	515						520					525			
Val	Asn	Ala	Arg	Asn	Val	Ala	Leu	Glu	Ala	Tyr	Leu	Ile	Lys	Pro	His
	530					535					540				
Ser	Tyr	Val	Gly	Leu	Thr	Cys	Thr	Ala	Phe	Gln	Arg	Arg	Glu	Gly	Gly
545					550					555					560
Val	Pro	Gly	Thr	Arg	Pro	Gly	Ser	Pro	Gly	Gln	Asn	Pro	Pro	Pro	Glu
				565					570					575	
Pro	Glu	Pro	Pro	Ala	Asp	Gln	Gln	Leu	Arg	Phe	Arg	Cys	Thr	Thr	Gly





Trp Arg Ala Cys Cys Pro Pro Ala Ser Pro Ala Ala Pro His Ala Pro  
 1075 1080 1085  
 Pro Arg Ala Leu Pro Ala Ala Glu Asp Gly Ser Pro Val Phe Gly  
 1090 1095 1100  
 Glu Gly Pro Pro Ser Leu Lys Ser Ser Pro Ser Gly Ser Ser Gly His  
 1105 1110 1115 1120  
 Pro Leu Ala Leu Gly Pro Cys Lys Leu Thr Asn Leu Gln Leu Ala Gln  
 1125 1130 1135  
 Ser Gln Val Cys Glu Ala Gly Ala Ala Gly Gly Glu Gly Glu Pro  
 1140 1145 1150  
 Glu Pro Ala Gly Thr Arg Gly Asn Leu Ala His Arg His Pro Asn Asn  
 1155 1160 1165  
 Val His Gly Arg Arg Ala His Lys Ser Arg Ala Lys Gly His Arg  
 1170 1175 1180  
 Ala Gly Glu Ala Cys Gly Lys Asn Arg Leu Lys Ala Leu Arg Gly Gly  
 1185 1190 1195 1200  
 Ala Ala Gly Ala Leu Glu Leu Leu Ser Ser Glu Ser Gly Ser Leu His  
 1205 1210 1215  
 Asn Ser Pro Thr Asp Ser Tyr Leu Gly Ser Ser Arg Asn Ser Pro Gly  
 1220 1225 1230  
 Ala Gly Leu Gln Leu Glu Gly Glu Pro Met Leu Thr Pro Ser Glu Gly  
 1235 1240 1245  
 Ser Asp Thr Ser Ala Ala Pro Leu Ser Glu Ala Gly Arg Ala Gly Gln  
 1250 1255 1260  
 Arg Arg Ser Ala Ser Arg Asp Ser Leu Lys Gly Gly Gly Ala Leu Glu  
 1265 1270 1275 1280  
 Lys Glu Ser His Arg Arg Ser Tyr Pro Leu Asn Ala Ala Ser Leu Asn  
 1285 1290 1295  
 Gly Ala Pro Lys Gly Gly Lys Tyr Asp Asp Val Thr Leu Met Gly Ala  
 1300 1305 1310  
 Glu Val Ala Ser Gly Gly Cys Met Lys Thr Gly Leu Trp Lys Ser Glu  
 1315 1320 1325  
 Thr Thr Val  
 1330

<210> 189  
 <211> 529  
 <212> PRT  
 <213> Homo sapiens

<400> 189  
 Met Ala Arg Phe Pro Lys Ala Asp Leu Ala Ala Ala Gly Val Met Leu  
 1 5 10 15  
 Leu Cys His Phe Phe Thr Asp Gln Phe Gln Phe Ala Asp Gly Lys Pro  
 20 25 30  
 Gly Asp Gln Ile Leu Asp Trp Gln Tyr Gly Val Thr Gln Ala Phe Pro  
 35 40 45  
 His Thr Glu Glu Glu Val Glu Val Asp Ser His Ala Tyr Ser His Arg  
 50 55 60  
 Trp Lys Arg Asn Leu Asp Phe Leu Lys Ala Val Asp Thr Asn Arg Ala  
 65 70 75 80  
 Ser Val Gly Gln Asp Ser Pro Glu Pro Arg Ser Phe Thr Asp Leu Leu  
 85 90 95  
 Leu Asp Asp Gly Gln Asp Asn Asn Thr Gln Ile Glu Glu Asp Thr Asp  
 100 105 110  
 His Asn Tyr Tyr Ile Ser Arg Ile Tyr Gly Pro Ser Asp Ser Ala Ser  
 115 120 125  
 Arg Asp Leu Trp Val Asn Ile Asp Gln Met Glu Lys Asp Lys Val Lys  
 130 135 140  
 Ile His Gly Ile Leu Ser Asn Thr His Arg Gln Ala Ala Arg Val Asn  
 145 150 155 160

Leu Ser Phe Asp Phe Pro Phe Tyr Gly His Phe Leu Arg Glu Ile Thr  
 165 170 175  
 Val Ala Thr Gly Gly Phe Ile Tyr Thr Gly Glu Val Val His Arg Met  
 180 185 190  
 Leu Thr Ala Thr Gln Tyr Ile Ala Pro Leu Met Ala Asn Phe Asp Pro  
 195 200 205  
 Ser Val Ser Arg Asn Ser Thr Val Arg Tyr Phe Asp Asn Gly Thr Ala  
 210 215 220  
 Leu Val Val Gln Trp Asp His Val His Leu Gln Asp Asn Tyr Asn Leu  
 225 230 235 240  
 Gly Ser Phe Thr Phe Gln Ala Thr Leu Leu Met Asp Gly Arg Ile Ile  
 245 250 255  
 Phe Gly Tyr Lys Glu Ile Pro Val Leu Val Thr Gln Ile Ser Ser Thr  
 260 265 270  
 Asn His Pro Val Lys Val Gly Leu Ser Asp Ala Phe Val Val Val His  
 275 280 285  
 Arg Ile Gln Gln Ile Pro Asn Val Arg Arg Arg Thr Ile Tyr Glu Tyr  
 290 295 300  
 His Arg Val Glu Leu Gln Met Ser Lys Ile Thr Asn Ile Ser Ala Val  
 305 310 315 320  
 Glu Met Thr Pro Leu Pro Thr Cys Leu Gln Phe Asn Arg Cys Gly Pro  
 325 330 335  
 Cys Val Ser Ser Ser Gln Ile Gly Phe Asn Cys Ser Trp Cys Ser Lys Leu  
 340 345 350  
 Gln Arg Cys Ser Ser Gly Phe Asp Arg His Arg Gln Asp Trp Val Asp  
 355 360 365  
 Ser Gly Cys Pro Glu Glu Ser Lys Glu Lys Met Cys Glu Asn Thr Glu  
 370 375 380  
 Pro Val Glu Thr Ser Ser Arg Thr Thr Thr Thr Ile Gly Ala Thr Thr  
 385 390 395 400  
 Thr Gln Phe Arg Val Leu Thr Thr Thr Arg Arg Ala Val Thr Ser Gln  
 405 410 415  
 Phe Pro Thr Ser Leu Pro Thr Glu Asp Asp Thr Lys Ile Ala Leu His  
 420 425 430  
 Leu Lys Asp Asn Gly Ala Ser Thr Asp Asp Ser Ala Ala Glu Lys Lys  
 435 440 445  
 Gly Gly Thr Leu His Ala Gly Leu Ile Val Gly Ile Leu Ile Leu Val  
 450 455 460  
 Leu Ile Val Ala Thr Ala Ile Leu Val Thr Val Tyr Met Tyr His His  
 465 470 475 480  
 Pro Thr Ser Ala Ala Ser Ile Phe Phe Ile Glu Arg Arg Pro Ser Arg  
 485 490 495  
 Trp Pro Ala Met Lys Phe Arg Arg Gly Ser Gly His Pro Ala Tyr Ala  
 500 505 510  
 Glu Val Glu Pro Val Gly Glu Lys Glu Gly Phe Ile Val Ser Glu Gln  
 515 520 525  
 Cys

<210> 190  
 <211> 765  
 <212> PRT  
 <213> Mus musculus

<400> 190  
 Met Leu Leu Arg Leu Leu Leu Ala Trp Val Ala Ala Val Pro Ala Leu  
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 Gly Gln Val Pro Trp Thr Pro Glu Pro Arg Ala Ala Cys Gly Pro Ser  
 20 25 30  
 Ser Cys Tyr Ala Leu Phe Pro Arg Arg Arg Thr Phe Leu Glu Ala Trp  
 35 40 45

Arg	Ala	Cys	Arg	Glu	Leu	Gly	Gly	Asn	Leu	Ala	Thr	Pro	Arg	Thr	Pro
	50					55					60				
Glu	Glu	Ala	Gln	Arg	Val	Asp	Ser	Leu	Val	Gly	Val	Gly	Pro	Ala	Asn
65					70					75					80
Gly	Leu	Leu	Trp	Ile	Gly	Leu	Gln	Arg	Gln	Ala	Arg	Gln	Cys	Gln	Pro
				85					90					95	
Gln	Arg	Pro	Leu	Arg	Gly	Phe	Ile	Trp	Thr	Thr	Gly	Asp	Gln	Asp	Thr
			100					105					110		
Ala	Phe	Thr	Asn	Trp	Ala	Gln	Pro	Ala	Thr	Glu	Gly	Pro	Cys	Pro	Ala
	115						120					125			
Gln	Arg	Cys	Ala	Ala	Leu	Glu	Ala	Ser	Gly	Glu	His	Arg	Trp	Leu	Glu
	130					135					140				
Gly	Ser	Cys	Thr	Leu	Ala	Val	Asp	Gly	Tyr	Leu	Cys	Gln	Phe	Gly	Phe
145					150					155					160
Glu	Gly	Ala	Cys	Pro	Ala	Leu	Pro	Leu	Glu	Val	Gly	Gln	Ala	Gly	Pro
				165					170					175	
Ala	Val	Tyr	Thr	Thr	Pro	Phe	Asn	Leu	Val	Ser	Ser	Glu	Phe	Glu	Trp
			180					185					190		
Leu	Pro	Phe	Gly	Ser	Val	Ala	Ala	Val	Gln	Cys	Gln	Ala	Gly	Arg	Gly
	195						200					205			
Ala	Ser	Leu	Leu	Cys	Val	Lys	Gln	Pro	Ser	Gly	Gly	Val	Gly	Trp	Ser
	210					215						220			
Gln	Thr	Gly	Pro	Leu	Cys	Pro	Gly	Thr	Gly	Cys	Gly	Pro	Asp	Asn	Gly
225					230					235					240
Gly	Cys	Glu	His	Glu	Cys	Val	Glu	Glu	Val	Asp	Gly	Ala	Val	Ser	Cys
				245					250					255	
Arg	Cys	Ser	Glu	Gly	Phe	Arg	Leu	Ala	Ala	Asp	Gly	His	Ser	Cys	Glu
			260					265					270		
Asp	Pro	Cys	Ala	Gln	Ala	Pro	Cys	Glu	Gln	Gln	Cys	Glu	Pro	Gly	Gly
	275						280					285			
Pro	Gln	Gly	Tyr	Ser	Cys	His	Cys	Arg	Leu	Gly	Phe	Arg	Pro	Ala	Glu
	290					295					300				
Asp	Asp	Pro	His	Arg	Cys	Val	Asp	Thr	Asp	Glu	Cys	Gln	Ile	Ala	Gly
305					310					315					320
Val	Cys	Gln	Gln	Met	Cys	Val	Asn	Tyr	Val	Gly	Gly	Phe	Glu	Cys	Tyr
				325					330					335	
Cys	Ser	Glu	Gly	His	Glu	Leu	Glu	Ala	Asp	Gly	Ile	Ser	Cys	Ser	Pro
			340					345				350			
Ala	Gly	Ala	Met	Gly	Ala	Gln	Ala	Ser	Gln	Asp	Leu	Arg	Asp	Glu	Leu
	355						360					365			
Leu	Asp	Gly	Gly	Glu	Glu	Gly	Glu	Asp	Glu	Glu	Glu	Pro	Trp	Glu	Asp
	370					375					380				
Phe	Asp	Gly	Thr	Trp	Thr	Glu	Glu	Gln	Gly	Ile	Leu	Trp	Leu	Ala	Pro
385					390					395					400
Thr	His	Pro	Pro	Asp	Phe	Gly	Leu	Pro	Tyr	Arg	Pro	Asn	Phe	Pro	Gln
				405					410					415	
Asp	Gly	Glu	Pro	Gln	Arg	Leu	His	Leu	Glu	Pro	Thr	Trp	Pro	Pro	Pro
			420					425					430		
Leu	Ser	Ala	Pro	Arg	Gly	Pro	Tyr	His	Ser	Ser	Val	Val	Ser	Ala	Thr
	435						440					445			
Arg	Pro	Met	Val	Ile	Ser	Ala	Thr	Arg	Pro	Thr	Leu	Pro	Ser	Ala	His
	450					455					460				
Lys	Thr	Ser	Val	Ile	Ser	Ala	Thr	Arg	Pro	Pro	Leu	Ser	Pro	Val	His
465					470					475					480
Pro	Pro	Ala	Met	Ala	Pro	Ala	Thr	Pro	Pro	Ala	Val	Phe	Ser	Glu	His
				485					490					495	
Gln	Ile	Pro	Lys	Ile	Lys	Ala	Asn	Tyr	Pro	Asp	Leu	Pro	Phe	Gly	His
			500				505						510		
Lys	Pro	Gly	Ile	Thr	Ser	Ala	Thr	His	Pro	Ala	Arg	Ser	Pro	Pro	Tyr
	515						520					525			
Gln	Pro	Pro	Ile	Ile	Ser	Thr	Asn	Tyr	Pro	Gln	Val	Phe	Pro	Pro	His

530		535		540
Gln Ala Pro Met Ser	Pro Asp Thr His Thr	Ile Thr Tyr Leu Pro	Pro	
545	550	555	560	
Val Pro Pro His Leu	Asp Pro Gly Asp Thr	Ser Lys Ala His	Gln	
	565	570	575	
His Pro Leu Leu Pro	Asp Ala Pro Gly Ile Arg	Thr Gln Ala Pro	Gln	
	580	585	590	
Leu Ser Val Ser Ala	Leu Gln Pro Pro Leu	Pro Thr Asn Ser Arg	Ser	
	595	600	605	
Ser Val His Glu Thr	Pro Val Pro Ala Ala	Asn Gln Pro Pro	Ala Phe	
	610	615	620	
Pro Ser Ser Pro Leu	Pro Pro Gln Arg Pro	Thr Asn Gln Thr	Ser Ser	
625	630	635	640	
Ile Ser Pro Thr His	Ser Tyr Ser Arg Ala	Pro Leu Val Pro	Arg Glu	
	645	650	655	
Gly Val Pro Ser Pro	Lys Ser Val Pro Gln	Leu Pro Ser Val	Pro Ser	
	660	665	670	
Thr Ala Ala Pro Thr	Ala Leu Ala Glu Ser	Gly Leu Ala Gly	Gln Ser	
	675	680	685	
Gln Arg Asp Asp Arg	Trp Leu Leu Val Ala	Leu Leu Val Pro	Thr Cys	
	690	695	700	
Val Phe Leu Val Val	Leu Leu Ala Leu Gly	Ile Val Tyr Cys	Thr Arg	
705	710	715	720	
Cys Gly Ser His Ala	Pro Asn Lys Arg Ile	Thr Asp Cys Tyr	Arg Trp	
	725	730	735	
Val Thr His Ala Gly	Asn Lys Ser Ser Thr	Glu Pro Met Pro	Pro Arg	
	740	745	750	
Gly Ser Leu Thr Gly	Val Gln Thr Cys Arg	Thr Ser Val		
	755	760	765	

<210> 191  
 <211> 1329  
 <212> PRT  
 <213> Mus musculus

<400> 191
Met Pro Val Pro Pro Ala Arg Leu Leu Leu Leu Pro Leu Leu Pro Cys
1 5 10 15
Leu Leu Leu Leu Ala Pro Gly Thr Arg Gly Ala Pro Gly Cys Pro Val
20 25 30
Pro Ile Arg Gly Cys Lys Cys Ser Gly Glu Arg Pro Lys Gly Leu Ser
35 40 45
Gly Gly Ala His Asn Pro Ala Arg Arg Arg Val Val Cys Gly Gly Gly
50 55 60
Asp Leu Pro Glu Pro Pro Asp Pro Gly Leu Leu Pro Asn Gly Thr Ile
65 70 75 80
Thr Leu Leu Leu Ser Asn Asn Lys Ile Thr Gly Leu Arg Asn Gly Ser
85 90 95
Phe Leu Gly Leu Ser Leu Leu Glu Lys Leu Asp Leu Arg Ser Asn Val
100 105 110
Ile Ser Thr Val Gln Pro Gly Ala Phe Leu Gly Leu Gly Glu Leu Lys
115 120 125
Arg Leu Asp Leu Ser Asn Asn Arg Ile Gly Cys Leu Thr Ser Glu Thr
130 135 140
Phe Gln Gly Leu Pro Arg Leu Leu Arg Leu Asn Ile Ser Gly Asn Ile
145 150 155 160
Tyr Ser Ser Leu Gln Pro Gly Val Phe Asp Glu Leu Pro Ala Leu Lys
165 170 175
Ile Val Asp Phe Gly Thr Glu Phe Leu Thr Cys Asp Cys Arg Leu Arg
180 185 190
Trp Leu Leu Pro Trp Ala Arg Asn His Ser Leu Gln Leu Ser Glu Arg

		195				200			205					
Thr	Leu	Cys	Ala	Tyr	Pro	Ser	Ala	Leu	His	Ala	His	Ala	Leu	Ser
	210					215					220			
Leu	Gln	Glu	Ser	Gln	Leu	Arg	Cys	Glu	Gly	Ala	Leu	Glu	Leu	His
225					230					235				240
His	Tyr	Leu	Ile	Pro	Ser	Leu	Arg	Gln	Val	Val	Phe	Gln	Gly	Asp
				245				250						255
Leu	Pro	Phe	Gln	Cys	Ser	Ala	Ser	Tyr	Leu	Gly	Asn	Asp	Thr	Arg
			260					265					270	
His	Trp	Tyr	His	Asn	Gly	Ala	Pro	Met	Glu	Ser	Asp	Glu	Gln	Ala
	275					280					285			
Ile	Val	Leu	Ala	Glu	Asn	Leu	Ile	His	Asp	Cys	Thr	Phe	Ile	Thr
	290				295						300			
Glu	Leu	Thr	Leu	Ser	His	Ile	Gly	Val	Trp	Ala	Ser	Gly	Glu	Trp
305					310					315				320
Cys	Ser	Val	Ser	Thr	Val	Gln	Gly	Asn	Thr	Ser	Lys	Lys	Val	Glu
				325					330					335
Val	Val	Leu	Glu	Thr	Ser	Ala	Ser	Tyr	Cys	Pro	Ala	Glu	Arg	Val
			340					345					350	
Asn	Asn	Arg	Gly	Asp	Phe	Arg	Trp	Pro	Arg	Thr	Leu	Ala	Gly	Ile
	355						360				365			
Ala	Tyr	Gln	Ser	Cys	Leu	Gln	Tyr	Pro	Phe	Thr	Ser	Val	Pro	Leu
	370					375					380			
Gly	Gly	Ala	Pro	Gly	Thr	Arg	Ala	Ser	Arg	Arg	Cys	Asp	Arg	Ala
385					390					395				400
Arg	Trp	Glu	Pro	Gly	Asp	Tyr	Ser	His	Cys	Leu	Tyr	Thr	Asn	Asp
				405					410					415
Thr	Arg	Val	Leu	Tyr	Thr	Phe	Val	Leu	Met	Pro	Ile	Asn	Ala	Ser
			420					425					430	
Ala	Leu	Thr	Leu	Ala	His	Gln	Leu	Arg	Val	Tyr	Thr	Ala	Glu	Ala
	435						440					445		
Ser	Phe	Ser	Asp	Met	Met	Asp	Val	Val	Tyr	Val	Ala	Gln	Met	Ile
	450					455					460			
Lys	Phe	Leu	Gly	Tyr	Val	Asp	Gln	Ile	Lys	Glu	Leu	Val	Glu	Val
465					470					475				480
Val	Asp	Met	Ala	Ser	Asn	Leu	Met	Leu	Val	Asp	Glu	His	Leu	Leu
				485					490					495
Leu	Ala	Gln	Arg	Glu	Asp	Lys	Ala	Cys	Ser	Gly	Ile	Val	Gly	Ala
			500					505					510	
Glu	Arg	Ile	Gly	Gly	Ala	Ala	Leu	Ser	Pro	His	Ala	Gln	His	Ile
	515						520					525		
Val	Asn	Ser	Arg	Asn	Val	Ala	Leu	Glu	Ala	Tyr	Leu	Ile	Lys	Pro
	530					535					540			
Ser	Tyr	Val	Gly	Leu	Thr	Cys	Thr	Ala	Phe	Gln	Arg	Arg	Glu	Val
545					550					555				560
Val	Ser	Gly	Ala	Gln	Pro	Ser	Ser	Val	Gly	Gln	Asp	Ala	Pro	Val
				565					570					575
Pro	Glu	Pro	Leu	Ala	Asp	Gln	Gln	Leu	Arg	Phe	Arg	Cys	Thr	Thr
			580					585					590	
Arg	Pro	Asn	Ile	Ser	Leu	Ser	Ser	Phe	His	Ile	Lys	Asn	Ser	Val
		595					600					605		
Leu	Ala	Ser	Ile	Gln	Leu	Pro	Pro	Ser	Leu	Phe	Ser	Thr	Leu	Pro
	610					615					620			
Ala	Leu	Ala	Pro	Pro	Val	Pro	Pro	Asp	Cys	Thr	Leu	Gln	Leu	Leu
625					630					635				640
Phe	Arg	Asn	Gly	Arg	Leu	Phe	Arg	Ser	His	Gly	Asn	Asn	Thr	Ser
				645					650					655
Pro	Gly	Ala	Ala	Gly	Pro	Gly	Lys	Arg	Arg	Gly	Val	Ala	Thr	Pro
			660					665					670	
Ile	Phe	Ala	Gly	Thr	Ser	Gly	Cys	Gly	Val	Gly	Asn	Leu	Thr	Glu
		675					680					685		

Val	Ala	Val	Ser	Leu	Arg	His	Trp	Ala	Glu	Gly	Ala	Asp	Pro	Met	Ala
690						695					700				
Ala	Trp	Trp	Asn	Gln	Asp	Gly	Pro	Gly	Gly	Trp	Ser	Ser	Glu	Gly	Cys
705					710					715					720
Arg	Leu	Arg	Tyr	Ser	Gln	Pro	Asn	Val	Ser	Ser	Leu	Tyr	Cys	Gln	His
				725					730					735	
Leu	Gly	Asn	Val	Ala	Val	Leu	Met	Glu	Leu	Asn	Ala	Phe	Pro	Arg	Glu
			740					745					750		
Ala	Gly	Gly	Ser	Gly	Ala	Gly	Leu	His	Pro	Val	Val	Tyr	Pro	Cys	Thr
		755				760						765			
Ala	Leu	Leu	Leu	Leu	Cys	Leu	Phe	Ser	Thr	Ile	Ile	Thr	Tyr	Ile	Leu
770						775						780			
Asn	His	Ser	Ser	Ile	His	Val	Ser	Arg	Lys	Gly	Trp	His	Met	Leu	Leu
785					790					795					800
Asn	Leu	Cys	Phe	His	Met	Ala	Met	Thr	Ser	Ala	Val	Phe	Val	Gly	Gly
				805					810					815	
Val	Thr	Leu	Thr	Asn	Tyr	Gln	Met	Val	Cys	Gln	Ala	Val	Gly	Ile	Thr
			820					825					830		
Leu	His	Tyr	Ser	Ser	Leu	Ser	Ser	Leu	Leu	Trp	Met	Gly	Val	Lys	Ala
			835				840					845			
Arg	Val	Leu	His	Lys	Glu	Leu	Ser	Trp	Arg	Ala	Pro	Pro	Leu	Glu	Glu
						855					860				
Gly	Glu	Ala	Ala	Pro	Pro	Gly	Pro	Arg	Pro	Met	Leu	Arg	Phe	Tyr	Leu
865					870					875					880
Ile	Ala	Gly	Gly	Ile	Pro	Leu	Ile	Ile	Cys	Gly	Ile	Thr	Ala	Ala	Val
				885					890					895	
Asn	Ile	His	Asn	Tyr	Arg	Asp	His	Ser	Pro	Tyr	Cys	Trp	Leu	Val	Trp
			900					905					910		
Arg	Pro	Ser	Leu	Gly	Ala	Phe	Tyr	Ile	Pro	Val	Ala	Leu	Ile	Leu	Pro
			915				920					925			
Ile	Thr	Trp	Ile	Tyr	Phe	Leu	Cys	Ala	Gly	Leu	His	Leu	Arg	Ser	His
						935					940				
Val	Ala	Gln	Asn	Pro	Lys	Gln	Gly	Asn	Arg	Ile	Ser	Leu	Glu	Pro	Gly
945					950					955					960
Glu	Glu	Leu	Arg	Gly	Ser	Thr	Arg	Leu	Arg	Ser	Ser	Gly	Val	Leu	Leu
				965					970					975	
Asn	Asp	Ser	Gly	Ser	Leu	Leu	Ala	Thr	Val	Ser	Ala	Gly	Val	Gly	Thr
			980					985					990		
Pro	Ala	Pro	Pro	Glu	Asp	Gly	Asp	Gly	Val	Tyr	Ser	Pro	Gly	Val	Gln
		995				1000						1005			
Leu	Gly	Ala	Leu	Met	Thr	Thr	His	Phe	Leu	Tyr	Leu	Ala	Met	Trp	Ala
1010					1015						1020				
Cys	Gly	Ala	Leu	Ala	Val	Ser	Gln	Arg	Trp	Leu	Pro	Arg	Val	Val	Cys
1025					1030					1035					1040
Ser	Cys	Leu	Tyr	Gly	Val	Ala	Ala	Ser	Ala	Leu	Gly	Leu	Phe	Val	Phe
				1045					1050				1055		
Thr	His	His	Cys	Ala	Arg	Arg	Arg	Asp	Val	Arg	Ala	Ser	Trp	Arg	Ala
			1060					1065					1070		
Cys	Cys	Pro	Pro	Ala	Ser	Pro	Ser	Ala	Ser	His	Val	Pro	Ala	Arg	Ala
		1075					1080					1085			
Leu	Pro	Thr	Ala	Thr	Glu	Asp	Gly	Ser	Pro	Val	Leu	Gly	Glu	Gly	Pro
1090					1095						1100				
Ala	Ser	Leu	Lys	Ser	Ser	Pro	Ser	Gly	Ser	Ser	Gly	Arg	Ala	Pro	Pro
1105					1110						1115				1120
Pro	Pro	Cys	Lys	Leu	Thr	Asn	Leu	Gln	Val	Ala	Gln	Ser	Gln	Val	Cys
				1125					1130					1135	
Glu	Ala	Ser	Val	Ala	Ala	Arg	Gly	Asp	Gly	Glu	Pro	Glu	Pro	Thr	Gly
			1140				1145						1150		
Ser	Arg	Gly	Ser	Leu	Ala	Pro	Arg	His	His	Asn	Asn	Leu	His	His	Gly
		1155					1160					1165			
Arg	Arg	Val	His	Lys	Ser	Arg	Ala	Lys	Gly	His	Arg	Ala	Gly	Glu	Thr

1170	1175	1180
Gly Gly Lys Ser Arg Leu Lys Ala Leu Arg Ala Gly Thr Ser Pro Gly		
1185	1190	1195
Ala Pro Glu Leu Leu Ser Ser Glu Ser Gly Ser Leu His Asn Ser Pro		1200
	1205	1210
Ser Asp Ser Tyr Pro Gly Ser Ser Arg Asn Ser Pro Gly Asp Gly Leu		1215
	1220	1225
Pro Leu Glu Gly Glu Pro Met Leu Thr Pro Ser Glu Gly Ser Asp Thr		1230
	1235	1240
Ser Ala Ala Pro Ile Ala Glu Thr Gly Arg Pro Gly Gln Arg Arg Ser		1245
	1250	1255
Ala Ser Arg Asp Asn Leu Lys Gly Ser Gly Ser Ala Leu Glu Arg Glu		1260
1265	1270	1275
Ser Lys Arg Arg Ser Tyr Pro Leu Asn Thr Thr Ser Leu Asn Gly Ala		1280
	1285	1290
Pro Lys Gly Gly Lys Tyr Glu Asp Ala Ser Val Thr Gly Ala Glu Ala		1295
	1300	1305
Ile Ala Gly Gly Ser Met Lys Thr Gly Leu Trp Lys Ser Glu Thr Thr		1310
	1315	1320
		1325
Val		

<210> 192  
 <211> 500  
 <212> PRT  
 <213> Mus musculus

<400> 192
Met Arg Ala Gln Leu Trp Leu Leu Gln Leu Leu Leu Leu Arg Gly Ala
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Ala Arg Ala Leu Ser Pro Ala Thr Pro Ala Gly His Asn Glu Gly Gln
20 25 30
Asp Ser Ala Trp Thr Ala Lys Arg Thr Arg Gln Gly Trp Ser Arg Arg
35 40 45
Pro Arg Glu Ser Pro Ala Gln Val Leu Lys Pro Gly Lys Thr Gln Leu
50 55 60
Ser Gln Asp Leu Gly Gly Gly Ser Leu Ala Ile Asp Thr Leu Pro Asp
65 70 75 80
Asn Arg Thr Arg Val Val Glu Asp Asn His Asn Tyr Tyr Val Ser Arg
85 90 95
Val Tyr Gly Pro Gly Glu Lys Gln Ser Gln Asp Leu Trp Val Asp Leu
100 105 110
Ala Val Ala Asn Arg Ser His Val Lys Ile His Arg Ile Leu Ser Ser
115 120 125
Ser His Arg Gln Ala Ser Arg Val Val Leu Ser Phe Asp Phe Pro Phe
130 135 140
Tyr Gly His Pro Leu Arg Gln Ile Thr Ile Ala Thr Gly Gly Phe Ile
145 150 155 160
Phe Met Gly Asp Met Leu His Arg Met Leu Thr Ala Thr Gln Tyr Val
165 170 175
Ala Pro Leu Met Ala Asn Phe Asn Pro Gly Tyr Ser Asp Asn Ser Thr
180 185 190
Val Ala Tyr Phe Asp Asn Gly Thr Val Phe Val Val Gln Trp Asp His
195 200 205
Val Tyr Leu Gln Asp Arg Glu Asp Arg Gly Ser Phe Thr Phe Gln Ala
210 215 220
Ala Leu His Arg Asp Gly Arg Ile Val Phe Gly Tyr Lys Glu Ile Pro
225 230 235 240
Met Ala Val Leu Asp Ile Ser Ser Ala Gln His Pro Val Lys Ala Gly
245 250 255
Leu Ser Asp Ala Phe Met Ile Leu Asn Ser Ser Pro Glu Val Pro Glu

260 265 270  
 Ser Gln Arg Arg Thr Ile Phe Glu Tyr His Arg Val Glu Leu Asp Ser  
 275 280 285  
 Ser Lys Ile Thr Thr Thr Ser Ala Val Glu Phe Thr Pro Leu Pro Thr  
 290 295 300  
 Cys Leu Gln His Gln Ser Cys Asp Thr Cys Val Ser Ser Asn Leu Thr  
 305 310 315 320  
 Phe Asn Cys Ser Trp Cys His Val Leu Gln Arg Cys Ser Ser Gly Phe  
 325 330 335  
 Asp Arg Tyr Arg Gln Glu Trp Leu Thr Tyr Gly Cys Ala Gln Glu Ala  
 340 345 350  
 Glu Gly Lys Thr Cys Glu Asp Phe Gln Asp Asp Ser His Tyr Ser Ala  
 355 360 365  
 Ser Pro Asp Ser Ser Phe Ser Pro Phe Asn Gly Asp Ser Thr Thr Ser  
 370 375 380  
 Ser Ser Leu Phe Ile Asp Ser Leu Thr Thr Glu Asp Asp Thr Lys Leu  
 385 390 395 400  
 Asn Pro Tyr Ala Glu Gly Asp Gly Leu Pro Asp His Ser Ser Pro Lys  
 405 410 415  
 Ser Lys Gly Pro Pro Val His Leu Gly Thr Ile Val Gly Ile Val Leu  
 420 425 430  
 Ala Val Leu Val Ala Ala Ile Leu Ala Gly Ile Tyr Ile Ser  
 435 440 445  
 Gly His Pro Asn Ser Asn Ala Ala Leu Phe Phe Ile Glu Arg Arg Pro  
 450 455 460  
 His His Trp Pro Ala Met Lys Phe His Asn His Pro Asn His Ser Thr  
 465 470 475 480  
 Tyr Thr Glu Val Glu Pro Ser Gly His Glu Lys Glu Gly Phe Val Glu  
 485 490 495  
 Ala Glu Gln Cys  
 500

<210> 193  
 <211> 530  
 <212> PRT  
 <213> Mus musculus

<400> 193  
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 Leu Cys His Phe Leu Thr Asp Arg Phe His Phe Ala His Gly Glu Pro  
 20 25 30  
 Gly His His Thr Asn Asp Trp Ile Tyr Glu Val Thr Asn Ala Phe Pro  
 35 40 45  
 Trp Asn Glu Glu Gly Val Glu Val Asp Ser Gln Ala Tyr Asn His Arg  
 50 55 60  
 Trp Lys Arg Asn Val Asp Pro Phe Lys Ala Val Asp Thr Asn Arg Ala  
 65 70 75 80  
 Ser Met Gly Gln Ala Ser Pro Glu Ser Lys Gly Phe Thr Asp Leu Leu  
 85 90 95  
 Leu Asp Asp Gly Gln Asp Asn Asn Thr Gln Ile Glu Glu Asp Thr Asp  
 100 105 110  
 His Asn Tyr Tyr Ile Ser Arg Ile Tyr Gly Pro Ala Asp Ser Ala Ser  
 115 120 125  
 Arg Asp Leu Trp Val Asn Ile Asp Gln Met Glu Lys Asp Lys Val Lys  
 130 135 140  
 Ile His Gly Ile Leu Ser Asn Thr His Arg Gln Ala Ala Arg Val Asn  
 145 150 155 160  
 Leu Ser Phe Asp Phe Pro Phe Tyr Gly His Phe Leu Asn Glu Val Thr  
 165 170 175  
 Val Ala Thr Gly Gly Phe Ile Tyr Thr Gly Glu Val Val His Arg Met





65					70					75				80
Ile	Val	Phe	Ser	Thr	Arg	Gly	Thr	Thr	Leu	Met	Lys	Leu	Thr	Glu Asp
				85					90					95
Arg	Glu	Gln	Ile	Arg	Gln	Gly	Leu	Glu	Glu	Leu	Gln	Lys	Val	Leu Pro
			100					105					110	
Gly	Gly	Asp	Thr	Tyr	Met	His	Glu	Gly	Phe	Glu	Arg	Ala	Ser	Glu Gln
		115					120					125		
Ile	Tyr	Tyr	Glu	Asn	Ser	Gln	Gly	Tyr	Arg	Thr	Ala	Ser	Val	Ile Ile
	130					135					140			
Ala	Leu	Thr	Asp	Gly	Glu	Leu	His	Glu	Asp	Leu	Phe	Phe	Tyr	Ser Glu
145					150				155					160
Arg	Glu	Ala	Asn	Arg	Ser	Arg	Asp	Leu	Gly	Ala	Ile	Val	Tyr	Cys Val
			165					170						175
Gly	Val	Lys	Asp	Phe	Asn	Glu	Thr	Gln	Leu	Ala	Arg	Ile	Ala	Asp Ser
			180					185					190	
Lys	Asp	His	Val	Phe	Pro	Val	Asn	Asp	Gly	Phe	Gln	Ala	Leu	Gln Gly
	195						200					205		
Ile	Ile	His	Ser	Ile	Leu	Lys	Lys	Ser	Cys	Ile	Glu	Ile	Leu	Ala Ala
	210					215					220			
Glu	Pro	Ser	Thr	Ile	Cys	Ala	Gly	Glu	Ser	Phe	Gln	Val	Val	Val Arg
225					230					235				240
Gly	Asn	Gly	Phe	Arg	His	Ala	Arg	Asn	Val	Asp	Arg	Val	Leu	Cys Ser
			245					250						255
Phe	Lys	Ile	Asn	Asp	Ser	Val	Thr	Leu	Asn	Glu	Lys	Pro	Phe	Ala Val
			260					265					270	
Glu	Asp	Thr	Tyr	Leu	Leu	Cys	Pro	Ala	Pro	Ile	Leu	Lys	Glu	Val Gly
	275						280					285		
Met	Lys	Ala	Ala	Leu	Gln	Val	Ser	Met	Asn	Asp	Gly	Leu	Ser	Phe Ile
	290				295						300			
Ser	Ser	Ser	Val	Ile	Ile	Thr	Thr	Thr	His	Cys	Ser	Asp	Gly	Ser Ile
305					310					315				320
Leu	Ala	Ile	Ala	Leu	Leu	Val	Leu	Phe	Leu	Leu	Ala	Leu	Ala	Leu
				325				330					335	
Leu	Trp	Trp	Phe	Trp	Pro	Leu	Cys	Cys	Thr	Val	Ile	Ile	Lys	Glu Val
			340					345					350	
Pro	Pro	Pro	Pro	Val	Glu	Glu	Ser	Glu	Glu	Glu	Asp	Asp	Gly	Leu
	355						360					365		
Pro	Lys	Lys	Lys	Trp	Pro	Thr	Val	Asp	Ala	Ser	Tyr	Tyr	Gly	Gly Arg
	370					375					380			
Gly	Val	Gly	Gly	Ile	Lys	Arg	Met	Glu	Val	Arg	Trp	Gly	Glu	Lys Gly
385					390					395				400
Ser	Thr	Glu	Glu	Gly	Ala	Lys	Leu	Glu	Lys	Ala	Lys	Asn	Ala	Arg Val
				405				410					415	
Lys	Met	Pro	Glu	Gln	Glu	Tyr	Glu	Phe	Pro	Glu	Pro	Arg	Asn	Leu Asn
	420							425					430	
Asn	Asn	Met	Arg	Arg	Pro	Ser	Ser	Pro	Arg	Lys	Trp	Tyr	Ser	Pro Ile
	435						440					445		
Lys	Gly	Lys	Leu	Asp	Ala	Leu	Trp	Val	Leu	Leu	Arg	Lys	Gly	Tyr Asp
	450					455					460			
Arg	Val	Ser	Val	Met	Arg	Pro	Gln	Pro	Gly	Asp	Thr	Gly	Arg	Cys Ile
465					470				475					480
Asn	Phe	Thr	Arg	Val	Lys	Asn	Ser	Gln	Pro	Ala	Lys	Tyr	Pro	Leu Asn
				485				490					495	
Asn	Thr	Tyr	His	Pro	Ser	Ser	Pro	Pro	Pro	Ala	Pro	Ile	Tyr	Thr Pro
	500							505					510	
Pro	Pro	Pro	Ala	Pro	His	Cys	Pro	Pro	Pro	Ala	Pro	Ser	Ala	Pro Thr
	515						520					525		
Pro	Pro	Ile	Pro	Ser	Pro	Pro	Ser	Thr	Leu	Pro	Pro	Pro	Pro	Gln Ala
	530					535					540			
Pro	Pro	Pro	Asn	Arg	Ala	Pro	Pro	Pro	Ser	Arg	Pro	Pro	Pro	Arg Pro
545					550				555					560

Ser Val

<210> 195  
<211> 2565  
<212> DNA  
<213> Homo sapiens

<400> 195  
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acccttgggc tgctgagccc cgtgccgcct gggggcccag cagctgctac gctctcttcc 120  
cacggcgccg caccttccctg gaggcctggc gggcctgccc cgagctgggg ggcgacctgg 180  
ccactccctg gacccccgag gagggccagc gtgtggacag cctgggtggg gggggcccag 240  
ccagccggct gctgtggatc gggctgcagc ggcaggcccg gcaatgccag ctgcagcgcc 300  
cactgcgcgg cttcacgtgg accacagggg accaggacac ggctttcacc aactggggccc 360  
agccagcctc tggaggcccc tgcccggccc agcgtgtgt ggccctggag gcaagtggcg 420  
agcaccgctg gctggagggc tcgtgcacgc tggctgtcga cggctacctg tgccagtttg 480  
gcttcgaggg cgctgcgccg gcgctgcaag atgaggcggg ccaggccggc ccagccgtgt 540  
ataccacgcc cttccacctg gtctccacag agtttgagtg gctgcccttc ggctctgtgg 600  
ccgctgtgca gtgccaggct ggcaggggag cctctctgct ctgcgtgaag cagcctgagg 660  
gaggtgtggg ctggtcacgg gctggggccc tgtgcctggg gactggctgc agccctgaca 720  
acggggggct cgaacacgaa tgtgtggagg aggtggatgg tcacgtgtcc tgccgctgca 780  
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cgtgcgagca gcagtgtgag cccgggtggc cacaaggcta cagctgccac tgtcgcctgg 900  
gtttccggcc agcggaggat gatccgcacc gctgtgtgga cacagatgag tgccagattg 960  
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cattgccttc tgcccaccag cctcctgtga tccctgccac acaccagct ttgtcccggt 1440  
accaccagat ccccgatgat gcagccaaact atccagatct gccttctgcc taccaaccgg 1500  
gtattctctc tgtctctcat tcagcacagc ctctgcccac ccagccccc atgatctcaa 1560  
ccaaatatcc ggagctcttc cctgcccacc agtcccccat gtttccagac acccgggctg 1620  
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ccaccctcgg tgcccagcta cccctcaag cccagatgc ccttgtcctc agaaccagg 1740  
ccaccagct tccattatc ccaactgcc agcctctctt gaccaccacc tccagggtcc 1800  
ctgtgtctcc tgcccatcaa atctctgtgc ctgctgccac ccagcccgca gccctcccca 1860  
ccctcctgcc ctctcagagc cccactaacc agacctcacc catcagccct acacatcccc 1920  
attccaaagc cccccaatc ccaagggaag atggcccag tcccaagttg gccctgtggc 1980  
tgccctcacc agctcccaca gcagcccaa cagccctggg ggaggctggg cttgccgagc 2040  
acagccagag ggatgaccgg tggctgtctg tggcactcct ggtgccaacg tgtgtctttt 2100  
tggtggctct gcttgcaact ggcacgtgt actgcacccg ctgtggcccc catgcacca 2160  
acaagcgcac cactgactgc tatcgtggg tcatccatgc tgggagcaag agcccaacag 2220  
aaccatgcc cccaggggc agcctcacag ggggtgcagac ctgcagaacc agcgtgtgat 2280  
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tcctctctca accactagac ttggctctca ggaactctgc ttccctggccc agcgtctctg 2460  
accaaggata caccaaagcc cttaagacct cagggggcgg gtgctggggg cttctccaat 2520  
aatgggggtg tcaaccttaa aaaaaaaaaa aaaaaaaaaa aaaaa 2565

<210> 196  
<211> 757  
<212> PRT  
<213> Homo sapiens

<400> 196  
Met Leu Leu Arg Leu Leu Ala Trp Ala Ala Ala Gly Pro Thr Leu  
1 5 10 15

Gly	Gln	Asp	Pro	Trp	Ala	Ala	Glu	Pro	Arg	Ala	Ala	Cys	Gly	Pro	Ser
			20					25					30		
Ser	Cys	Tyr	Ala	Leu	Phe	Pro	Arg	Arg	Arg	Thr	Phe	Leu	Glu	Ala	Trp
		35					40					45			
Arg	Ala	Cys	Arg	Glu	Leu	Gly	Gly	Asp	Leu	Ala	Thr	Pro	Arg	Thr	Pro
	50					55					60				
Glu	Glu	Ala	Gln	Arg	Val	Asp	Ser	Leu	Val	Gly	Ala	Gly	Pro	Ala	Ser
65					70					75					80
Arg	Leu	Leu	Trp	Ile	Gly	Leu	Gln	Arg	Gln	Ala	Arg	Gln	Cys	Gln	Leu
				85					90					95	
Gln	Arg	Pro	Leu	Arg	Gly	Phe	Thr	Trp	Thr	Thr	Gly	Asp	Gln	Asp	Thr
		100						105					110		
Ala	Phe	Thr	Asn	Trp	Ala	Gln	Pro	Ala	Ser	Gly	Gly	Pro	Cys	Pro	Ala
	115						120					125			
Gln	Arg	Cys	Val	Ala	Leu	Glu	Ala	Ser	Gly	Glu	His	Arg	Trp	Leu	Glu
	130					135					140				
Gly	Ser	Cys	Thr	Leu	Ala	Val	Asp	Gly	Tyr	Leu	Cys	Gln	Phe	Gly	Phe
145					150					155					160
Glu	Gly	Ala	Cys	Pro	Ala	Leu	Gln	Asp	Glu	Ala	Gly	Gln	Ala	Gly	Pro
				165					170					175	
Ala	Val	Tyr	Thr	Thr	Pro	Phe	His	Leu	Val	Ser	Thr	Glu	Phe	Glu	Trp
		180						185					190		
Leu	Pro	Phe	Gly	Ser	Val	Ala	Ala	Val	Gln	Cys	Gln	Ala	Gly	Arg	Gly
		195					200					205			
Ala	Ser	Leu	Leu	Cys	Val	Lys	Gln	Pro	Glu	Gly	Gly	Val	Gly	Trp	Ser
	210					215					220				
Arg	Ala	Gly	Pro	Leu	Cys	Leu	Gly	Thr	Gly	Cys	Ser	Pro	Asp	Asn	Gly
225					230					235					240
Gly	Cys	Glu	His	Glu	Cys	Val	Glu	Glu	Val	Asp	Gly	His	Val	Ser	Cys
				245					250				255		
Arg	Cys	Thr	Glu	Gly	Phe	Arg	Leu	Ala	Ala	Asp	Gly	Arg	Ser	Cys	Glu
		260						265					270		
Asp	Pro	Cys	Ala	Gln	Ala	Pro	Cys	Glu	Gln	Gln	Cys	Glu	Pro	Gly	Gly
		275					280					285			
Pro	Gln	Gly	Tyr	Ser	Cys	His	Cys	Arg	Leu	Gly	Phe	Arg	Pro	Ala	Glu
	290					295					300				
Asp	Asp	Pro	His	Arg	Cys	Val	Asp	Thr	Asp	Glu	Cys	Gln	Ile	Ala	Gly
305					310					315					320
Val	Cys	Gln	Gln	Met	Cys	Val	Asn	Tyr	Val	Gly	Gly	Phe	Glu	Cys	Tyr
				325					330				335		
Cys	Ser	Glu	Gly	His	Glu	Leu	Glu	Ala	Asp	Gly	Ile	Ser	Cys	Ser	Pro
		340						345				350			
Ala	Gly	Ala	Met	Gly	Ala	Gln	Ala	Ser	Gln	Asp	Leu	Gly	Asp	Glu	Leu
		355					360					365			
Leu	Asp	Asp	Gly	Glu	Asp	Glu	Glu	Asp	Glu	Asp	Glu	Ala	Trp	Lys	Ala
	370					375					380				
Phe	Asn	Gly	Gly	Trp	Thr	Glu	Met	Pro	Gly	Ile	Leu	Trp	Met	Glu	Pro
385					390					395					400
Thr	Gln	Pro	Pro	Asp	Phe	Ala	Leu	Ala	Tyr	Arg	Pro	Ser	Phe	Pro	Glu
				405					410					415	
Asp	Arg	Glu	Pro	Gln	Ile	Pro	Tyr	Pro	Glu	Pro	Thr	Trp	Pro	Pro	Pro
		420					425						430		
Leu	Ser	Ala	Pro	Arg	Val	Pro	Tyr	His	Ser	Ser	Val	Leu	Ser	Val	Thr
		435					440					445			
Arg	Pro	Val	Val	Val	Ser	Ala	Thr	His	Pro	Thr	Leu	Pro	Ser	Ala	His
	450					455					460				
Gln	Pro	Pro	Val	Ile	Pro	Ala	Thr	His	Pro	Ala	Leu	Ser	Arg	Asp	His
465					470					475					480
Gln	Ile	Pro	Val	Ile	Ala	Ala	Asn	Tyr	Pro	Asp	Leu	Pro	Ser	Ala	Tyr
				485					490					495	
Gln	Pro	Gly	Ile	Leu	Ser	Val	Ser	His	Ser	Ala	Gln	Pro	Pro	Ala	His

500					505					510					
Gln	Pro	Pro	Met	Ile	Ser	Thr	Lys	Tyr	Pro	Glu	Leu	Phe	Pro	Ala	His
515					520					525					
Gln	Ser	Pro	Met	Phe	Pro	Asp	Thr	Arg	Val	Ala	Gly	Thr	Gln	Thr	Thr
530					535					540					
Thr	His	Leu	Pro	Gly	Ile	Pro	Pro	Asn	His	Ala	Pro	Leu	Val	Thr	Thr
545					550					555					
Leu	Gly	Ala	Gln	Leu	Pro	Pro	Gln	Ala	Pro	Asp	Ala	Leu	Val	Leu	Arg
565					570					575					
Thr	Gln	Ala	Thr	Gln	Leu	Pro	Ile	Ile	Pro	Thr	Ala	Gln	Pro	Ser	Leu
580					585					590					
Thr	Thr	Thr	Ser	Arg	Ser	Pro	Val	Ser	Pro	Ala	His	Gln	Ile	Ser	Val
595					600					605					
Pro	Ala	Ala	Thr	Gln	Pro	Ala	Ala	Leu	Pro	Thr	Leu	Leu	Pro	Ser	Gln
610					615					620					
Ser	Pro	Thr	Asn	Gln	Thr	Ser	Pro	Ile	Ser	Pro	Thr	His	Pro	His	Ser
625					630					635					
Lys	Ala	Pro	Gln	Ile	Pro	Arg	Glu	Asp	Gly	Pro	Ser	Pro	Lys	Leu	Ala
645					650					655					
Leu	Trp	Leu	Pro	Ser	Pro	Ala	Pro	Thr	Ala	Ala	Pro	Thr	Ala	Leu	Gly
660					665					670					
Glu	Ala	Gly	Leu	Ala	Glu	His	Ser	Gln	Arg	Asp	Asp	Arg	Trp	Leu	Leu
675					680					685					
Val	Ala	Leu	Leu	Val	Pro	Thr	Cys	Val	Phe	Leu	Val	Val	Leu	Leu	Ala
690					695					700					
Leu	Gly	Ile	Val	Tyr	Cys	Thr	Arg	Cys	Gly	Pro	His	Ala	Pro	Asn	Lys
705					710					715					
Arg	Ile	Thr	Asp	Cys	Tyr	Arg	Trp	Val	Ile	His	Ala	Gly	Ser	Lys	Ser
725					730					735					
Pro	Thr	Glu	Pro	Met	Pro	Pro	Arg	Gly	Ser	Leu	Thr	Gly	Val	Gln	Thr
740					745					750					
Cys	Arg	Thr	Ser	Val											
755															

<210> 197  
 <211> 2973  
 <212> DNA  
 <213> Homo sapiens

<400> 197		
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gatccccgcg	cagtgacccg	ggagccacca
gcaggcagct	ccccgcagct	cccgcgctt
ccggccccgc	attccagcc	ccgagccatg
ctcagtgtgc	ccgcaaaaa	ctcataccgc
aagagctcca	tcgtgtctcg	cttcctcaat
atcgaggact	tccaccgtaa	ggatataaac
ctggatacct	ctggcaacca	ccccttcccc
gatgtcttca	tcctggtggt	cagcctggat
cttcagaagc	agatcctgga	ggtcaagtcc
gagctgcccc	tggtcatctg	tggcaacaag
cccaccaccg	aggccgagct	gctggtgtcg
tcggccaaga	agaacaccaa	cgtggacgag
ctgccacacg	agatgagccc	cgccctgcat
ttccacacca	ggcccttctg	catgcccgc
tcgccccttg	cccgccgccc	cagcgtcaac
cttcgggaag	gccaggcccc	tgagagggac
ggggcggggc	ttggccagtg	ccttcaggga
ccccaccgag	gccccggcag	cagtcttgtt
ccggcgctg	gcctccgcac	attcgtctgc
cacagctcct	tggtggtttc	atctcctctg
cgcccgggcg	cagccccggcg	tcccagagcag
gaggtctcggc	cagactcttg	gaggtctcggc
ctctgagccg	ccaggcagct	ggctggagca
tgtccagcgg	atgaagactt	tgccagagggc
tcgggtgcctc	atcggtggtgc	gaactgcacg
tcgggtgggc	aggaccagta	tcgggtgggc
cacacccacc	acatgtacca	aggaccagta
gctcgacatc	ggtcaagcgc	cacacccacc
cctcacaggg	ccttcgatga	gctcgacatc
ggagggcgcg	acaagaccaa	ccttcgatga
ccgccagggtg	gaggtgtccat	acaagaccaa
cttcgaggtg	gaggtgtccat	gaggtgtccat
catggccaag	tgctctttcag	gaggtgtccat
cggtgacgcc	ccgtgcagta	tgctctttcag
tggcatggtc	tggtgacgcta	ccgtgcagta
ggccaagggtc	agtgacctca	tggcatggtc
gaggggatgct	agtgacctca	agtgacctca
gtgcgcattct	agtgacctca	agtgacctca
ctggaggccc	agtgacctca	agtgacctca
tccgcttgctc	agtgacctca	agtgacctca
gcctcaagag	agtgacctca	agtgacctca

ttaggcagag	actcaagtta	caccttcctc	tcttgggggt	ggaagaaatg	ttgatgccag	1320
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tctgcacccc	ctcccacccc	cagcacacac	acaagttggc	ccccagctgc	gcctgacatt	1560
gagccagtgg	actctgtgtc	tgaagggggc	gtggccacac	ctcctagacc	acgcccacca	1620
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 <212> PRT  
 <213> Homo sapiens

<400> 204  
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 Ala Ala Arg Gly Gln Pro Ser Arg Arg Val Ser Lys Leu Ala Ser Gly  
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 Pro Leu Ala Ala Pro Ala Gln Pro Arg Pro Leu Arg Ser Leu Ser Pro  
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 Gly Ser Ala Gly Thr Arg Asp Gly Gly Val Leu Pro Ala Ala Ala Glu  
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 Glu Ala Ala Glu Gly Pro Ala Arg Gly Ala Trp Pro Ser Val Thr Glu  
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 Met Arg Lys Leu Phe Gly Gly Pro Gly Ser Arg Arg Pro Ser Ala Asp  
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 Pro Ala Arg Glu Ser Arg Gln Pro Pro Thr Pro Pro Pro Arg Thr Cys  
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 Phe Pro Leu Ala Gly Leu Arg Ser Ala Arg Pro Leu Thr Gly Pro Glu  
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 Thr Glu Gly Arg Leu Arg Arg Pro Gln Gln Gln Gln Glu Arg Ala Gln  
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 Arg Pro Ala Asp Gly Leu His Ser Trp His Ile Phe Ser Gln Pro Gln  
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 Ala Gly Ala Arg Ala Ser Cys Ser Ser Ser Ser Ile Ala Ala Ser Tyr  
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 Pro Val Ser Arg Ser Arg Ala Ala Ser Ser Glu Glu Glu Glu Glu  
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 Gly Pro Pro Gln Leu Pro Gly Ala Gln Ser Pro Ala Tyr His Gly Gly  
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 His Ser Ser Gly Ser Asp Asp Asp Arg Asp Gly Glu Gly Gly His Arg  
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 Asp Cys Arg Pro Asp Ser Asp Gly Leu Asn Leu Ser Ser Met Asn Ser  
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 Asp Asp Asp Leu Trp Ser Ser Arg Gly Ser Gly Gly Trp Gly Val Tyr  
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 Arg Ser Pro Ser Phe Gly Ala Gly Glu Gly Leu Leu Arg Ser Gln Ala  
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 Arg Thr Arg Ala Lys Gly Pro Gly Gly Thr Ser Arg Ala Leu Arg Asp  
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Gly	Gly	Phe	Glu	Pro	Glu	Lys	Ser	Arg	Gln	Arg	Lys	Ser	Leu	Ser	Asn
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Pro	Asp	Ile	Ala	Ser	Glu	Thr	Leu	Thr	Leu	Leu	Ser	Phe	Leu	Arg	Ser
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Asp	Leu	Ser	Glu	Leu	Arg	Val	Arg	Lys	Pro	Gly	Gly	Ser	Ser	Gly	Asp
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Lys	Ser	Phe	Thr	Cys	Ser	Glu	Lys	Pro	Met	Ala	Arg	Arg	Leu	Pro	Arg
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Thr	Ser	Ala	Leu	Lys	Ser	Ser	Ser	Ser	Glu	Leu	Leu	Leu	Thr	Gly	Pro
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Gln	Glu	Ala	Arg	Gln	Val	Phe	Glu	Lys	Ile	Gln	Arg	Met	Gly	Ala	Gln
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Gln	Asp	Asp	Gly	Ser	Asp	Ala	Pro	Pro	Gly	Ser	Pro	Asp	Trp	Ala	Gly
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Asp	Val	Thr	Arg	Gly	Gln	Arg	Ser	Gln	Glu	Glu	Leu	Ser	Gly	Pro	Glu
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Ser	Ser	Leu	Thr	Asp	Glu	Gly	Ile	Gly	Ala	Asp	Pro	Glu	Pro	Pro	Val
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Leu	Gly	Gly	Trp	Ala	Leu	Val	Ser	Pro	Glu	Thr	Pro	Pro	Thr	Pro	Gly
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Ala	Leu	Arg	Arg	Arg	Arg	Lys	Val	Pro	Pro	Ser	Gly	Ser	Gly	Gly	Ser
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Glu	Leu	Ser	Asn	Gly	Glu	Ala	Gly	Glu	Ala	Tyr	Arg	Ser	Leu	Ser	Asp
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Pro	Ile	Pro	Gln	Arg	His	Arg	Ala	Ala	Thr	Ser	Glu	Glu	Pro	Thr	Gly
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Phe	Ser	Val	Asp	Ser	Asn	Leu	Leu	Gly	Ser	Leu	Ser	Pro	Lys	Thr	Gly
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Asp	Trp	Ser	Val	Gly	Ser	Glu	Glu	Ser	Lys	Gly	Tyr	Gln	Glu	Val	Ile
785					790					795					800
Gln	Ser	Ile	Val	Gln	Gly	Pro	Gly	Thr	Leu	Gly	Arg	Val	Val	Asp	Asp
				805					810					815	
Arg	Ile	Ala	Gly	Lys	Ala	Pro	Lys	Lys	Lys	Ser	Leu	Ser	Asp	Pro	Ser
			820					825					830		
Arg	Arg	Gly	Glu	Leu	Ala	Gly	Pro	Gly	Phe	Glu	Gly	Pro	Gly	Gly	Glu
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Pro	Ile	Arg	Glu	Val	Glu	Pro	Met	Leu	Pro	Pro	Ser	Ser	Ser	Glu	Pro
	850					855					860				
Ile	Leu	Val	Glu	Gln	Arg	Ala	Glu	Pro	Glu	Glu	Pro	Gly	Ala	Thr	Arg
865					870					875					880
Ser	Arg	Ala	Gln	Ser	Glu	Arg	Ala	Leu	Pro	Glu	Ala	Leu	Pro	Pro	Pro
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Ala	Thr	Ala	His	Arg	Asn	Phe	His	Leu	Asp	Pro	Lys	Leu	Ala	Asp	Ile
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Leu	Ser	Pro	Arg	Leu	Ile	Arg	Arg	Gly	Ser	Lys	Lys	Arg	Pro	Ala	Arg
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Ser	Ser	His	Gln	Glu	Leu	Arg	Arg	Asp	Glu	Gly	Ser	Gln	Asp	Gln	Thr

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Gly Ser Leu Ser Arg Ala Arg Pro Ser Ser Arg His Val Arg His Ala				
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Ser Val Pro Ala Thr Phe Met Pro Ile Val Val Pro Glu Pro Pro Thr				
	965		970	975
Ser Val Gly Pro Pro Val Ala Val Pro Glu Pro Ile Gly Phe Pro Thr				
	980		985	990
Arg Ala His Pro Thr Leu Gln Ala Pro Ser Leu Glu Asp Val Thr Lys				
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Gln Tyr Met Leu Asn Leu His Ser Gly Glu Val Pro Ala Pro Val Pro				
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Val Asp Met Pro Cys Leu Pro Leu Ala Ala Pro Pro Ser Ala Glu Ala				
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Lys Pro Pro Glu Ala Ala Arg Pro Ala Asp Glu Pro Thr Pro Ala Ser				
	1045		1050	1055
Lys Cys Cys Ser Lys Pro Gln Val Asp Met Arg Lys His Val Ala Met				
	1060		1065	1070
Thr Leu Leu Asp Thr Glu Gln Ser Tyr Val Glu Ser Leu Arg Thr Leu				
	1075	1080		1085
Met Gln Gly Tyr Met Gln Pro Leu Lys Gln Pro Glu Asn Ser Val Leu				
	1090	1095		1100
Cys Asp Pro Ser Leu Val Asp Glu Ile Phe Asp Gln Ile Pro Glu Leu				
1105		1110		1115
Leu Glu His His Glu Gln Phe Leu Glu Gln Val Arg His Cys Met Gln				
	1125		1130	1135
Thr Trp His Ala Gln Gln Lys Val Gly Ala Leu Leu Val Gln Ser Phe				
	1140		1145	1150
Ser Lys Asp Val Leu Val Asn Ile Tyr Ser Ala Tyr Ile Asp Asn Phe				
	1155	1160		1165
Leu Asn Ala Lys Asp Ala Val Arg Val Ala Lys Glu Ala Arg Pro Ala				
	1170	1175		1180
Phe Leu Lys Phe Leu Glu Gln Ser Met Arg Glu Asn Lys Glu Lys Gln				
1185		1190		1195
Ala Leu Ser Asp Leu Met Ile Lys Pro Val Gln Arg Ile Pro Arg Tyr				
	1205		1210	1215
Glu Leu Leu Val Lys Asp Leu Leu Lys His Thr Pro Glu Asp His Pro				
	1220		1225	1230
Asp His Pro Leu Leu Leu Glu Ala Gln Arg Asn Ile Lys Gln Val Ala				
	1235		1240	1245
Glu Arg Ile Asn Lys Gly Val Arg Ser Ala Glu Glu Ala Glu Arg His				
1250		1255		1260
Ala Arg Val Leu Gln Glu Ile Glu Ala His Ile Glu Gly Met Glu Asp				
1265		1270		1275
Leu Gln Ala Pro Leu Arg Arg Phe Leu Arg Gln Glu Met Val Ile Glu				
	1285		1290	1295
Val Lys Ala Ile Gly Gly Lys Lys Asp Arg Ser Leu Phe Leu Phe Thr				
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Asp Leu Ile Val Cys Thr Thr Leu Lys Arg Lys Ser Gly Ser Leu Arg				
	1315		1320	1325
Arg Ser Ser Met Ser Leu Tyr Thr Ala Ala Ser Val Ile Asp Thr Ala				
	1330		1335	1340
Ser Lys Tyr Lys Met Leu Trp Lys Leu Pro Leu Glu Asp Ala Asp Ile				
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Ile Lys Gly Ala Ser Gln Ala Thr Asn Arg Glu Asn Ile Gln Lys Ala				
	1365		1370	1375
Ile Ser Arg Leu Asp Glu Asp Leu Thr Thr Leu Gly Gln Met Ser Lys				
	1380		1385	1390
Leu Ser Glu Ser Leu Gly Phe Pro His Gln Ser Leu Asp Asp Ala Leu				
	1395		1400	1405
Arg Asp Leu Ser Ala Ala Met His Arg Asp Leu Ser Glu Lys Gln Ala				
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Leu Cys Tyr Ala Leu Ser Phe Pro Pro Thr Lys Leu Glu Leu Cys Ala  
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 1460 1465 1470  
 Leu Ala Ser Ser Lys Ser Cys Leu Asp Pro Glu Phe Leu Lys Ala Ile  
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 Leu Glu Met Thr Pro Gly Leu Gly Glu Gly Asp Pro Arg Pro Glu Leu  
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 Val Pro Phe Asp Ser Asp Ser Asp Glu Ser Ser Pro Ser Pro Ser  
 1635 1640 1645  
 Gly Thr Leu Gln Ser Gln Ala Ser Arg Ser Thr Ile Ser Ser Ser Phe  
 1650 1655 1660  
 Gly Asn Glu Glu Thr Pro Ser Ser Lys Glu Ala Thr Ala Glu Thr Thr  
 1665 1670 1675 1680  
 Ser Ser Glu Glu Glu Gln Glu Pro Gly Phe Leu Pro Leu Ser Gly Ser  
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 Phe Gly Pro Gly Gly Pro Cys Gly Thr Ser Pro Met Asp Gly Arg Ala  
 1700 1705 1710  
 Leu Arg Arg Ser Ser His Gly Ser Phe Thr Arg Gly Ser Leu Glu Asp  
 1715 1720 1725  
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 Thr Glu Asp Gly Cys Val His Val Tyr Gln Ser Ser Asp Ser Ile Arg  
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 Asp Arg Arg Asn Ser Met Lys Leu Gln His Ala Ala Ser Val Thr Cys  
 1765 1770 1775  
 Ile Leu Tyr Leu Asn Asn Gln Val Phe Val Ser Leu Ala Asn Gly Glu  
 1780 1785 1790  
 Leu Val Val Tyr Gln Arg Glu Ala Gly His Phe Trp Asp Pro Gln Asn  
 1795 1800 1805  
 Phe Lys Ser Val Thr Leu Gly Thr Gln Gly Ser Pro Ile Thr Lys Met  
 1810 1815 1820  
 Val Ser Val Gly Gly Arg Leu Trp Cys Gly Cys Gln Asn Arg Val Leu  
 1825 1830 1835 1840  
 Val Leu Ser Pro Asp Thr Leu Gln Leu Glu His Met Phe Tyr Val Gly  
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 Gln Asp Ser Ser Arg Cys Val Ala Cys Met Val Asp Ser Ser Leu Gly  
 1860 1865 1870  
 Val Trp Val Thr Leu Lys Gly Ser Ala His Val Cys Leu Tyr His Pro  
 1875 1880 1885  
 Asp Thr Phe Glu Gln Leu Ala Glu Val Asp Val Thr Pro Pro Val His  
 1890 1895 1900  
 Arg Met Leu Ala Gly Ser Asp Ala Ile Ile Arg Gln His Lys Ala Ala



1905		1910		1915		1920
Cys Leu Arg Ile Thr Ala Leu Leu Val Cys Glu Glu Leu Leu Trp Val						
	1925		1930		1935	
Gly Thr Ser Ala Gly Val Val Leu Thr Met Pro Thr Ser Pro Gly Thr						
	1940		1945		1950	
Val Ser Cys Pro Arg Ala Pro Leu Ser Pro Thr Gly Leu Gly Gln Gly						
	1955		1960		1965	
His Thr Gly His Val Arg Phe Leu Ala Ala Val Gln Leu Pro Asp Gly						
	1970		1975		1980	
Phe Asn Leu Leu Cys Pro Thr Pro Pro Pro Pro Asp Thr Gly Pro						
	1985		1990		1995	2000
Glu Lys Leu Pro Ser Leu Glu His Arg Asp Ser Pro Trp His Arg Gly						
	2005		2010		2015	
Pro Ala Pro Ala Arg Pro Lys Met Leu Val Ile Ser Gly Gly Asp Gly						
	2020		2025		2030	
Tyr Glu Asp Phe Arg Leu Ser Ser Gly Gly Gly Ser Ser Ser Glu Thr						
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<210> 205  
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 <212> DNA  
 <213> Homo sapiens

<400> 205

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Ala	Leu	Pro	Pro	Asp	Val	His	His	Leu	His	Ala	Glu	Arg	Arg	Gly	Pro
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Gln	Pro	Trp	His	Ala	Ala	Leu	Pro	Ser	Ser	Pro	Ala	Pro	Ala	Pro	Ala
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Thr	Gln	Glu	Ala	Pro	Arg	Pro	Ala	Ser	Ser	Leu	Arg	Pro	Pro	Arg	Cys
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Gly	Val	Pro	Asp	Pro	Ser	Asp	Gly	Leu	Ser	Ala	Arg	Asn	Arg	Gln	Lys
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Arg	Phe	Val	Leu	Ser	Gly	Gly	Arg	Trp	Glu	Lys	Thr	Asp	Leu	Thr	Tyr
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Arg	Ile	Leu	Arg	Phe	Pro	Trp	Gln	Leu	Val	Gln	Glu	Gln	Val	Arg	Gln
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Thr	Met	Ala	Glu	Ala	Leu	Lys	Val	Trp	Ser	Asp	Val	Thr	Pro	Leu	Thr
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Phe	Thr	Glu	Val	His	Glu	Gly	Arg	Ala	Asp	Ile	Met	Ile	Asp	Phe	Ala
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Arg	Tyr	Trp	His	Gly	Asp	Asp	Leu	Pro	Phe	Asp	Gly	Pro	Gly	Gly	Ile
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Leu	Ala	His	Ala	Phe	Phe	Pro	Lys	Thr	His	Arg	Glu	Gly	Asp	Val	His
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Phe	Asp	Tyr	Asp	Glu	Thr	Trp	Thr	Ile	Gly	Asp	Asp	Gln	Gly	Thr	Asp
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Leu	Leu	Gln	Val	Ala	Ala	His	Ala	Phe	Gly	His	Val	Leu	Gly	Leu	Gln
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His	Thr	Thr	Ala	Ala	Lys	Ala	Leu	Met	Ser	Ala	Phe	Tyr	Thr	Phe	Arg
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Tyr	Pro	Leu	Ser	Leu	Ser	Pro	Asp	Asp	Cys	Arg	Gly	Val	Gln	His	Leu
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Tyr	Gly	Gln	Pro	Trp	Pro	Thr	Val	Thr	Ser	Arg	Thr	Pro	Ala	Leu	Gly
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Pro	Gln	Ala	Gly	Ile	Asp	Thr	Asn	Glu	Ile	Ala	Pro	Leu	Glu	Pro	Asp
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Ala	Pro	Pro	Asp	Ala	Cys	Glu	Ala	Ser	Phe	Asp	Ala	Val	Ser	Thr	Ile
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Arg	Gly	Glu	Leu	Phe	Phe	Phe	Lys	Ala	Gly	Phe	Val	Trp	Arg	Leu	Arg
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Gly	Gly	Gln	Leu	Gln	Pro	Gly	Tyr	Pro	Ala	Leu	Ala	Ser	Arg	His	Trp
				325					330					335	
Gln	Gly	Leu	Pro	Ser	Pro	Val	Asp	Ala	Ala	Phe	Glu	Asp	Ala	Gln	Gly
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His	Ile	Trp	Phe	Phe	Gln	Gly	Ala	Gln	Tyr	Trp	Val	Tyr	Asp	Gly	Glu
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Lys	Pro	Val	Leu	Gly	Pro	Ala	Pro	Leu	Thr	Glu	Leu	Gly	Leu	Val	Arg
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Phe	Pro	Val	His	Ala	Ala	Leu	Val	Trp	Gly	Pro	Glu	Lys	Asn	Lys	Ile
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Tyr	Phe	Phe	Arg	Gly	Arg	Asp	Tyr	Trp	Arg	Phe	His	Pro	Ser	Thr	Arg

[illegible]

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147

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Arg Arg Ser Ala Ser Arg Asp Ser Leu Lys Gly Gly Ala Leu Glu					
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Lys Glu Ser His Arg Arg Ser Tyr Pro Leu Asn Ala Ala Ser Leu Asn					
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Thr Thr Val					
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Tyr	Asp	Gly	Lys	Gly	Val	Gly	Leu	Gly	Pro	Gly	Pro	Met	Gly	Leu	Met
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Gly	Pro	Arg	Gly	Pro	Pro	Gly	Ala	Ala	Gly	Ala	Pro	Gly	Pro	Gln	Gly
			100				105						110		
Phe	Gln	Gly	Pro	Ala	Gly	Glu	Pro	Gly	Glu	Pro	Gly	Gln	Thr	Gly	Pro
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Pro	Gln	Gly	Ala	Arg	Gly	Phe	Pro	Gly	Thr	Pro	Gly	Leu	Pro	Gly	Phe
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Lys	Gly	Ile	Arg	Gly	His	Asn	Gly	Leu	Asp	Gly	Leu	Lys	Gly	Gln	Pro
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Gly	Ala	Pro	Gly	Val	Lys	Gly	Glu	Pro	Gly	Ala	Pro	Gly	Glu	Asn	Gly
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Thr	Pro	Gly	Gln	Thr	Gly	Ala	Arg	Gly	Leu	Pro	Gly	Glu	Arg	Gly	Arg
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Val	Gly	Ala	Pro	Gly	Pro	Ala	Gly	Ala	Arg	Gly	Ser	Asp	Gly	Ser	Val
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Gly	Pro	Val	Gly	Pro	Ala	Gly	Pro	Ile	Gly	Ser	Ala	Gly	Pro	Pro	Gly
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Phe	Pro	Gly	Ala	Pro	Gly	Pro	Lys	Gly	Glu	Ile	Gly	Ala	Val	Gly	Asn
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<400> 216

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Gly	Asp	Asp	Phe	Val	Ser	Pro	Ala	Leu	Glu	Leu	Ser	Gly	Ala	Leu	Arg
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Phe	Pro	Pro	Thr	Phe	Gly	Ala	Val	Ala	Pro	Phe	Leu	Ala	Asp	Leu	Asp
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Thr	Thr	Asp	Gly	Leu	Gly	Lys	Val	Tyr	Tyr	Arg	Glu	Asp	Leu	Ser	Pro
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Ser	Ile	Thr	Gln	Arg	Ala	Ala	Glu	Cys	Val	His	Arg	Gly	Phe	Pro	Glu
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Ala	Pro	Tyr	Gln	Gly	Pro	Ser	Arg	Asp	Pro	Asp	Gln	Lys	Gly	Lys	Arg
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 370 375 380  
 Ser Arg Ala Glu Leu Gln His Ile Ala Thr Asp Asp Asn Leu Val Phe  
 385 390 395 400  
 Thr Val Pro Glu Phe Arg Ser Phe Gly Asp Leu Gln Glu Lys Leu Leu  
 405 410 415  
 Pro Tyr Ile Val Gly Val Ala Gln Arg His Ile Val Leu Lys Pro Pro  
 420 425 430



Thr	Ile	Val	Thr	Gln	Val	Ile	Glu	Val	Asn	Lys	Arg	Asp	Ile	Val	Phe
		435					440					445			
Leu	Val	Asp	Gly	Ser	Ser	Ala	Leu	Gly	Leu	Ala	Asn	Phe	Asn	Ala	Ile
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	465				470					475					480
Leu	Ile	Gln	Val	Ala	Val	Ala	Gln	Tyr	Ala	Asp	Thr	Val	Arg	Pro	Glu
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Phe	Tyr	Phe	Asn	Thr	His	Pro	Thr	Lys	Arg	Glu	Val	Ile	Thr	Ala	Val
			500					505					510		
Arg	Lys	Met	Lys	Pro	Leu	Asp	Gly	Ser	Ala	Leu	Tyr	Thr	Gly	Ser	Ala
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Leu	Asp	Phe	Val	Arg	Asn	Asn	Leu	Phe	Thr	Ser	Ser	Ala	Gly	Tyr	Arg
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Ala	Ala	Glu	Gly	Ile	Pro	Lys	Leu	Leu	Val	Leu	Ile	Thr	Gly	Gly	Lys
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Ser	Leu	Asp	Glu	Ile	Ser	Gln	Pro	Ala	Gln	Glu	Leu	Lys	Arg	Ser	Ser
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Glu	Glu	Ile	Ala	Phe	Asp	Ser	Ser	Leu	Val	Phe	Ile	Pro	Ala	Glu	Phe
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Arg	Ala	Ala	Pro	Leu	Gln	Gly	Met	Leu	Pro	Gly	Leu	Leu	Ala	Pro	Leu
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Ile	Phe	Leu	Leu	Asp	Gly	Ser	Ala	Asn	Val	Gly	Lys	Thr	Asn	Phe	Pro
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Tyr	Val	Arg	Asp	Phe	Val	Met	Asn	Leu	Val	Asn	Ser	Leu	Asp	Ile	Gly
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Asn	Asp	Asn	Ile	Arg	Val	Gly	Leu	Val	Gln	Phe	Ser	Asp	Thr	Pro	Val
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Thr	Glu	Phe	Ser	Leu	Asn	Thr	Tyr	Gln	Thr	Lys	Ser	Asp	Ile	Leu	Gly
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His	Leu	Arg	Gln	Leu	Gln	Leu	Gln	Gly	Gly	Ser	Gly	Leu	Asn	Thr	Gly
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Ser	Ala	Leu	Ser	Tyr	Val	Tyr	Ala	Asn	His	Phe	Thr	Glu	Ala	Gly	Gly
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Ser	Arg	Ile	Arg	Glu	His	Val	Pro	Gln	Leu	Leu	Leu	Leu	Leu	Thr	Ala
			740					745					750		
Gly	Gln	Ser	Glu	Asp	Ser	Tyr	Leu	Gln	Ala	Ala	Asn	Ala	Leu	Thr	Arg
		755					760					765			
Ala	Gly	Ile	Leu	Thr	Phe	Cys	Val	Gly	Ala	Ser	Gln	Ala	Asn	Lys	Ala
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Glu	Leu	Glu	Gln	Ile	Ala	Phe	Asn	Pro	Ser	Leu	Val	Tyr	Leu	Met	Asp
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Asp	Phe	Ser	Ser	Leu	Pro	Ala	Leu	Pro	Gln	Gln	Leu	Ile	Gln	Pro	Leu
			805						810					815	
Thr	Thr	Tyr	Val	Ser	Gly	Gly	Val	Glu	Glu	Val	Pro	Leu	Ala	Gln	Pro
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		835					840					845			
Val	Gly	Gln	Phe	Pro	Val	Val	Arg	Asp	Phe	Leu	Tyr	Lys	Ile	Ile	Asp
	850					855					860				
Glu	Leu	Asn	Val	Lys	Pro	Glu	Gly	Thr	Arg	Ile	Ala	Val	Ala	Gln	Tyr
	865				870					875					880
Ser	Asp	Asp	Val	Lys	Val	Glu	Ser	Arg	Phe	Asp	Glu	His	Gln	Ser	Lys
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Pro	Glu	Ile	Leu	Asn	Leu	Val	Lys	Arg	Met	Lys	Ile	Lys	Thr	Gly	Lys
			900					905					910		
Ala	Leu	Asn	Leu	Gly	Tyr	Ala	Leu	Asp	Tyr	Ala	Gln	Arg	Tyr	Ile	Phe



Thr Thr Leu Thr Ser Glu Gln Ile Gln Lys Leu Leu Ala Ser Thr Arg  
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 Tyr Pro Pro Pro Ala Val Glu Ser Asp Ala Ala Asp Ile Val Phe Leu  
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 Ile Asp Ser Ser Glu Gly Val Arg Pro Asp Gly Phe Ala His Ile Arg  
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 Asp Phe Val Ser Arg Ile Val Arg Arg Leu Asn Ile Gly Pro Ser Lys  
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 Val Arg Val Gly Val Val Gln Phe Ser Asn Asp Val Phe Pro Glu Phe  
 1475 1480 1485  
 Tyr Leu Lys Thr Tyr Arg Ser Gln Ala Pro Val Leu Asp Ala Ile Arg  
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 Glu Phe Val Ala Arg Asn Leu Phe Val Lys Ser Ala Gly Ser Arg Ile  
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 Ala Ala Thr Pro Ala Pro Pro Gly Val Asp Thr Pro Pro Ser Arg  
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 Pro Glu Lys Lys Lys Ala Asp Ile Val Phe Leu Leu Asp Gly Ser Ile  
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 Cys Pro Gly Val Thr Asp Ala Ala Lys Ala Cys Asn Leu Asp Val Ile  
 1825 1830 1835 1840  
 Leu Gly Phe Asp Gly Ser Arg Asp Gln Asn Val Phe Val Ala Gln Lys  
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 Gly Phe Glu Ser Lys Val Asp Ala Ile Leu Asn Arg Ile Ser Gln Met  
 1860 1865 1870  
 His Arg Val Ser Cys Ser Gly Gly Arg Ser Pro Thr Val Arg Val Ser  
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 Val Val Ala Asn Thr Pro Ser Gly Pro Val Glu Ala Phe Asp Phe Asp

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Glu Tyr Gln Pro Glu Met Leu Glu Lys Phe Arg Asn Met Arg Ser Gln				
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His Pro Tyr Val Leu Thr Glu Asp Thr Leu Lys Val Tyr Leu Asn Lys				
	1925		1930	1935
Phe Arg Gln Ser Ser Pro Asp Ser Val Lys Val Val Ile His Phe Thr				
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Asp Gly Ala Asp Gly Asp Leu Ala Asp Leu His Arg Ala Ser Glu Asn				
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Leu Arg Gln Glu Gly Val Arg Ala Leu Ile Leu Val Gly Leu Glu Arg				
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Val Val Asn Leu Glu Arg Leu Met His Leu Glu Phe Gly Arg Gly Phe				
	1985		1990	1995
Met Tyr Asp Arg Pro Leu Arg Leu Asn Leu Leu Asp Leu Asp Tyr Glu				
	2005		2010	2015
Leu Ala Glu Gln Leu Asp Asn Ile Ala Glu Lys Ala Cys Cys Gly Val				
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Pro Cys Lys Cys Ser Gly Gln Arg Gly Asp Arg Gly Pro Ile Gly Ser				
	2035		2040	2045
Ile Gly Pro Lys Gly Ile Pro Gly Glu Asp Gly Tyr Arg Gly Tyr Pro				
	2050		2055	2060
Gly Asp Glu Gly Gly Pro Gly Glu Arg Gly Pro Pro Gly Val Asn Gly				
	2065		2070	2075
Thr Gln Gly Phe Gln Gly Cys Pro Gly Gln Arg Gly Val Lys Gly Ser				
	2085		2090	2095
Arg Gly Phe Pro Gly Glu Lys Gly Glu Val Gly Glu Ile Gly Leu Asp				
	2100		2105	2110
Gly Leu Asp Gly Glu Asp Gly Asp Lys Gly Leu Pro Gly Ser Ser Gly				
	2115		2120	2125
Glu Lys Gly Asn Pro Gly Arg Arg Gly Asp Lys Gly Pro Arg Gly Glu				
	2130		2135	2140
Lys Gly Glu Arg Gly Asp Val Gly Ile Arg Gly Asp Pro Gly Asn Pro				
	2145		2150	2155
Gly Gln Asp Ser Gln Glu Arg Gly Pro Lys Gly Glu Thr Gly Asp Leu				
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Gly Pro Met Gly Val Pro Gly Arg Asp Gly Val Pro Gly Gly Pro Gly				
	2180		2185	2190
Glu Thr Gly Lys Asn Gly Gly Phe Gly Arg Arg Gly Pro Pro Gly Ala				
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Lys Gly Asn Lys Gly Gly Pro Gly Gln Pro Gly Phe Glu Gly Glu Gln				
	2210		2215	2220
Gly Thr Arg Gly Ala Gln Gly Pro Ala Gly Pro Ala Gly Pro Pro Gly				
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Leu Ile Gly Glu Gln Gly Ile Ser Gly Pro Arg Gly Ser Gly Gly Ala				
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Arg Gly Ala Pro Gly Glu Arg Gly Arg Thr Gly Pro Leu Gly Arg Lys				
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Gly Glu Pro Gly Glu Pro Gly Pro Lys Gly Gly Ile Gly Asn Pro Gly				
	2275		2280	2285
Pro Arg Gly Glu Thr Gly Asp Asp Gly Arg Asp Gly Val Gly Ser Glu				
	2290		2295	2300
Gly Arg Arg Gly Lys Lys Gly Glu Arg Gly Phe Pro Gly Tyr Pro Gly				
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Pro Lys Gly Asn Pro Gly Glu Pro Gly Leu Asn Gly Thr Thr Gly Pro				
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Lys Gly Ile Arg Gly Arg Arg Gly Asn Ser Gly Pro Pro Gly Ile Val				
	2340		2345	2350
Gly Gln Lys Gly Arg Pro Gly Tyr Pro Gly Pro Ala Gly Pro Arg Gly				
	2355		2360	2365
Asn Arg Gly Asp Ser Ile Asp Gln Cys Ala Leu Ile Gln Ser Ile Lys				
	2370		2375	2380

Asp	Lys	Cys	Pro	Cys	Cys	Tyr	Gly	Pro	Leu	Glu	Cys	Pro	Val	Phe	Pro	2385	2390	2395	2400
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Thr	Phe	Gly	Arg	Met	Arg	Asp	Val	Val	Leu	Ser	Ile	Val	Asn	Val	Leu		2420	2425	2430
Thr	Ile	Ala	Glu	Ser	Asn	Cys	Pro	Thr	Gly	Ala	Arg	Val	Ala	Val	Val		2435	2440	2445
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Arg	Lys	Ser	Val	Leu	Leu	Asp	Lys	Ile	Lys	Asn	Leu	Gln	Val	Ala	Leu		2465	2470	2475
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Asn	Thr	Phe	Lys	Arg	Val	Arg	Asn	Gly	Phe	Leu	Met	Arg	Lys	Val	Ala		2500	2505	2510
Val	Phe	Phe	Ser	Asn	Thr	Pro	Thr	Arg	Ala	Ser	Pro	Gln	Leu	Arg	Glu		2515	2520	2525
Ala	Val	Leu	Lys	Leu	Ser	Asp	Ala	Gly	Ile	Thr	Pro	Leu	Phe	Leu	Thr		2530	2535	2540
Arg	Gln	Glu	Asp	Arg	Gln	Leu	Ile	Asn	Ala	Leu	Gln	Ile	Asn	Asn	Thr		2545	2550	2555
Ala	Val	Gly	His	Ala	Leu	Val	Leu	Pro	Ala	Gly	Arg	Asp	Leu	Thr	Asp		2565	2570	2575
Phe	Leu	Glu	Asn	Val	Leu	Thr	Cys	His	Val	Cys	Leu	Asp	Ile	Cys	Asn		2580	2585	2590
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Asp	Ser	Ala	Glu	Thr	Thr	Thr	Leu	Phe	Gln	Phe	Asn	Glu	Met	Lys	Lys		2625	2630	2635
Tyr	Ile	Ala	Tyr	Leu	Val	Arg	Gln	Leu	Asp	Met	Ser	Pro	Asp	Pro	Lys		2645	2650	2655
Ala	Ser	Gln	His	Phe	Ala	Arg	Val	Ala	Val	Val	Gln	His	Ala	Pro	Ser		2660	2665	2670
Glu	Ser	Val	Ser	Met	Pro	Pro	Val	Lys	Val	Glu	Phe	Ser	Leu	Thr	Asp		2675	2680	2685
Tyr	Gly	Ser	Lys	Glu	Lys	Leu	Val	Asp	Phe	Leu	Ser	Arg	Gly	Met	Thr		2690	2695	2700
Gln	Leu	Gln	Gly	Thr	Arg	Ala	Leu	Gly	Ser	Ala	Ile	Glu	Tyr	Thr	Ile		2705	2710	2715
Glu	Asn	Val	Phe	Glu	Ser	Ala	Pro	Asn	Pro	Arg	Asp	Leu	Lys	Ile	Val		2725	2730	2735
Val	Leu	Met	Leu	Thr	Gly	Glu	Val	Pro	Glu	Gln	Gln	Leu	Glu	Glu	Ala		2740	2745	2750
Gln	Arg	Val	Ile	Leu	Gln	Ala	Lys	Cys	Lys	Gly	Tyr	Phe	Phe	Val	Val		2755	2760	2765
Leu	Gly	Ile	Gly	Arg	Lys	Val	Asn	Ile	Lys	Glu	Val	Tyr	Thr	Phe	Ala		2770	2775	2780
Ser	Glu	Pro	Asn	Asp	Val	Phe	Phe	Lys	Leu	Val	Asp	Lys	Ser	Thr	Glu		2785	2790	2795
Leu	Asn	Glu	Glu	Pro	Leu	Met	Arg	Phe	Gly	Arg	Leu	Leu	Pro	Ser	Phe		2805	2810	2815
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Cys	Asp	Trp	Phe	Gln	Gly	Asp	Gln	Pro	Thr	Lys	Asn	Leu	Val	Lys	Phe		2835	2840	2845
Gly	His	Lys	Gln	Val	Asn	Val	Pro	Asn	Asn	Val	Thr	Ser	Ser	Pro	Thr		2850	2855	2860
Ser	Asn	Pro	Val	Thr	Thr	Thr	Lys	Pro	Val	Thr	Thr	Thr	Lys	Pro	Val				

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Ile	Gly	Gly	Leu	Leu	Ala	Gly	Gln	Thr	Tyr	His	Val	Ala	Val	Val	Cys													
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Tyr	Leu	Arg	Ser	Gln	Val	Arg	Ala	Thr	Tyr	His	Gly	Ser	Phe	Ser	Thr													
															3060						3065						3070	
Lys	Lys	Ser	Gln	Pro	Pro	Pro	Pro	Gln	Pro	Ala	Arg	Ser	Ala	Ser	Ser													
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Ser	Thr	Ile	Asn	Leu	Met	Val	Ser	Thr	Glu	Pro	Leu	Ala	Leu	Thr	Glu													
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Thr	Asp	Ile	Cys	Lys	Leu	Pro	Lys	Asp	Glu	Gly	Thr	Cys	Arg	Asp	Phe													
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Ile	Leu	Lys	Trp	Tyr	Tyr	Asp	Pro	Asn	Thr	Lys	Ser	Cys	Ala	Arg	Phe													
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Trp	Tyr	Gly	Gly	Cys	Gly	Gly	Asn	Glu	Asn	Lys	Phe	Gly	Ser	Gln	Lys													
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Glu	Cys	Glu	Lys	Val	Cys	Ala	Pro	Val	Leu	Ala	Lys	Pro	Gly	Val	Ile													
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<212> PRT
<213> Homo sapiens
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 <212> DNA  
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 <212> PRT  
 <213> Homo sapiens

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 Gly Ile Tyr Asp Ala Asp Leu Asn Asp Glu Trp Val Gln Arg Ala Leu  
 35 40 45  
 His Phe Ala Ile Ser Glu Tyr Asn Lys Ala Thr Glu Asp Glu Tyr Tyr  
 50 55 60  
 Arg Arg Pro Leu Gln Val Leu Arg Ala Arg Glu Gln Thr Phe Gly Gly  
 65 70 75 80  
 Val Asn Tyr Phe Phe Asp Val Glu Val Gly Arg Thr Ile Cys Thr Lys  
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 Ser Gln Pro Asn Leu Asp Thr Cys Ala Phe His Glu Gln Pro Glu Leu  
 100 105 110  
 Gln Lys Lys Gln Leu Cys Ser Phe Glu Ile Tyr Glu Val Pro Trp Glu  
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130

135

140

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 <211> 141  
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 <213> Homo sapiens

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 Gly Ile Tyr Asn Ala Asp Leu Asn Asp Glu Trp Val Gln Arg Ala Leu  
 35 40 45  
 His Phe Ala Ile Ser Glu Tyr Asn Lys Ala Thr Lys Asp Asp Tyr Tyr  
 50 55 60  
 Arg Arg Pro Leu Arg Val Leu Arg Ala Arg Gln Gln Thr Val Gly Gly  
 65 70 75 80  
 Val Asn Tyr Phe Phe Asp Val Glu Val Gly Arg Thr Ile Cys Thr Lys  
 85 90 95  
 Ser Gln Pro Asn Leu Asp Thr Cys Ala Phe His Glu Gln Pro Glu Leu  
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 Gln Lys Lys Gln Leu Cys Ser Phe Glu Ile Tyr Glu Val Pro Trp Glu  
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 <211> 1466  
 <212> PRT  
 <213> Homo sapiens

<400> 226  
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 Ser His Leu Gly Gln Ser Tyr Ala Asp Arg Asp Val Trp Lys Pro Glu  
 35 40 45  
 Pro Cys Gln Ile Cys Val Cys Asp Ser Gly Ser Val Leu Cys Asp Asp  
 50 55 60  
 Ile Ile Cys Asp Asp Gln Glu Leu Asp Cys Pro Asn Pro Glu Ile Pro  
 65 70 75 80  
 Phe Gly Glu Cys Cys Ala Val Cys Pro Gln Pro Pro Thr Ala Pro Thr  
 85 90 95  
 Arg Pro Pro Asn Gly Gln Gly Pro Gln Gly Pro Lys Gly Asp Pro Gly  
 100 105 110  
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 115 120 125  
 Pro Gly Ser Pro Gly Ser Pro Gly Pro Pro Gly Ile Cys Glu Ser Cys  
 130 135 140  
 Pro Thr Gly Pro Gln Asn Tyr Ser Pro Gln Tyr Asp Ser Tyr Asp Val  
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 Lys Ser Gly Val Ala Val Gly Gly Leu Ala Gly Tyr Pro Gly Pro Ala  
 165 170 175  
 Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Thr Ser Gly His Pro Gly  
 180 185 190  
 Ser Pro Gly Ser Pro Gly Tyr Gln Gly Pro Pro Gly Glu Pro Gly Gln  
 195 200 205  
 Ala Gly Pro Ser Gly Pro Pro Gly Pro Pro Gly Ala Ile Gly Pro Ser  
 210 215 220  
 Gly Pro Ala Gly Lys Asp Gly Glu Ser Gly Arg Pro Gly Arg Pro Gly  
 225 230 235 240  
 Glu Arg Gly Leu Pro Gly Pro Pro Gly Ile Lys Gly Pro Ala Gly Ile  
 245 250 255  
 Pro Gly Phe Pro Gly Met Lys Gly His Arg Gly Phe Asp Gly Arg Asn  
 260 265 270  
 Gly Glu Lys Gly Glu Thr Gly Ala Pro Gly Leu Lys Gly Glu Asn Gly  
 275 280 285  
 Leu Pro Gly Glu Asn Gly Ala Pro Gly Pro Met Gly Pro Arg Gly Ala  
 290 295 300  
 Pro Gly Glu Arg Gly Arg Pro Gly Leu Pro Gly Ala Ala Gly Ala Arg  
 305 310 315 320  
 Gly Asn Asp Gly Ala Arg Gly Ser Asp Gly Gln Pro Gly Pro Pro Gly  
 325 330 335  
 Pro Pro Gly Thr Ala Gly Phe Pro Gly Ser Pro Gly Ala Lys Gly Glu  
 340 345 350  
 Val Gly Pro Ala Gly Ser Pro Gly Ser Asn Gly Ala Pro Gly Gln Arg  
 355 360 365  
 Gly Glu Pro Gly Pro Gln Gly His Ala Gly Ala Gln Gly Pro Pro Gly  
 370 375 380  
 Pro Pro Gly Ile Asn Gly Ser Pro Gly Gly Lys Gly Glu Met Gly Pro



Pro	Gly	Pro	Pro	Gly	Ser	Asn	Gly	Asn	Pro	Gly	Pro	Pro	Gly	Pro	Ser
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Ala	Pro	Gly	Ser	Pro	Gly	Val	Ser	Gly	Pro	Lys	Gly	Asp	Ala	Gly	Gln
		915					920					925			
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945					950					955					960
Pro	Pro	Gly	Met	Pro	Gly	Pro	Arg	Gly	Ser	Pro	Gly	Pro	Gln	Gly	Val
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Lys	Gly	Glu	Ser	Gly	Lys	Pro	Gly	Ala	Asn	Gly	Leu	Ser	Gly	Glu	Arg
			980					985						990	
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Ala	Pro	Tyr	Tyr	Gly	Asp	Glu	Pro	Met	Asp	Phe	Lys	Ile	Asn	Thr	Asp
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Glu	Ile	Met	Thr	Ser	Leu	Lys	Ser	Val	Asn	Gly	Gln	Ile	Glu	Ser	Leu
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Ile	Ser	Pro	Asp	Gly	Ser	Arg	Lys	Asn	Pro	Ala	Arg	Asn	Cys	Arg	Asp
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Pro	Asn	Gln	Gly	Cys	Lys	Leu	Asp	Ala	Ile	Lys	Val	Phe	Cys	Asn	Met
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Glu	Thr	Gly	Glu	Thr	Cys	Ile	Ser	Ala	Asn	Pro	Leu	Asn	Val	Pro	Arg
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Lys	His	Trp	Trp	Thr	Asp	Ser	Ser	Ala	Glu	Lys	Lys	His	Val	Trp	Phe
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Leu	Pro	Glu	Asp	Val	Leu	Asp	Val	Gln	Leu	Ala	Phe	Leu	Arg	Leu	Leu
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Ser	Ser	Arg	Ala	Ser	Gln	Asn	Ile	Thr	Tyr	His	Cys	Lys	Asn	Ser	Ile

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Met	Gly	Ser	Asn	Glu	Gly	Glu	Phe	Lys	Ala	Glu	Gly	Asn	Ser	Lys	Phe
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Thr	Tyr	Thr	Val	Leu	Glu	Asp	Gly	Cys	Thr	Lys	His	Thr	Gly	Glu	Trp
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<210> 227  
 <211> 6663  
 <212> DNA  
 <213> Homo sapiens

<400> 227

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<210> 228
<211> 1202
<212> PRT
<213> Homo sapiens

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35 40 45
Gly Lys Val Glu Leu Val Phe Ser Ala Thr Pro Glu Lys Ile Gln Gly
50 55 60
Ser Glu His Leu Tyr Asn Asp His Gly Val Ile Val Asp Tyr Asn Thr
65 70 75 80
Thr Asp Pro Leu Ile Arg Trp Asp Ser Tyr Glu Asn Leu Ser Ala Asp
85 90 95
Gly Glu Val Leu His Thr Gln Gly Pro Val Asp Gly Ser Leu Tyr Ala
100 105 110
Lys Val Arg Lys Lys Ser Ser Ser Asp Pro Gly Ile Pro Gly Gly Pro
115 120 125
Gln Ala Ile Pro Ala Thr Asn Ser Pro Asp His Ser Asp His Thr Leu
130 135 140
Ser Val Ser Ser Asp Ser Gly His Ser Thr Ala Ser Ala Arg Thr Asp
145 150 155 160
Lys Thr Glu Glu Arg Leu Ala Pro Gly Thr Arg Arg Gly Leu Ser Ala
165 170 175
Gln Glu Lys Ala Glu Leu Asp Gln Leu Leu Ser Gly Phe Gly Leu Glu
180 185 190
Asp Pro Gly Ser Ser Leu Lys Glu Met Thr Asp Ala Arg Ser Lys Tyr
195 200 205
Ser Gly Thr Arg His Val Val Pro Ala Gln Val His Val Asn Gly Asp
210 215 220
Ala Ala Leu Lys Asp Arg Glu Thr Asp Ile Leu Asp Asp Glu Met Pro
225 230 235 240
His His Asp Leu His Ser Val Asp Ser Leu Gly Thr Leu Ser Ser Ser
245 250 255
Glu Gly Pro Gln Ser Ala His Leu Gly Pro Phe Thr Cys His Lys Ser
260 265 270
Ser Gln Asn Ser Leu Leu Ser Asp Gly Phe Gly Ser Asn Val Gly Glu
275 280 285
Asp Pro Gln Gly Thr Leu Val Pro Asp Leu Gly Leu Gly Met Asp Gly
290 295 300
Pro Tyr Glu Arg Glu Arg Thr Phe Gly Ser Arg Glu Pro Lys Gln Pro
305 310 315 320
Gln Pro Leu Leu Arg Lys Pro Ser Val Ser Ala Gln Met Gln Ala Tyr
325 330 335

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Met Gly Asp Val Ile His Arg Met Leu Thr Ala Thr Gln Tyr Val Ala  
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195 200 205  
Tyr Leu Gln Gly Trp Glu Asp Lys Gly Ser Phe Thr Phe Gln Ala Ala  
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Leu His His Asp Gly Arg Ile Val Phe Ala Tyr Lys Glu Ile Pro Met  
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Ser Val Pro Glu Ile Ser Ser Ser Gln His Pro Val Lys Thr Gly Leu  
245 250 255  
Ser Asp Ala Phe Met Ile Leu Asn Pro Ser Pro Asp Val Pro Glu Ser  
260 265 270  
Arg Arg Arg Ser Ile Phe Glu Tyr His Arg Ile Glu Leu Asp Pro Ser  
275 280 285  
Lys Val Thr Ser Met Ser Ala Val Glu Phe Thr Pro Leu Pro Thr Cys  
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305 310 315 320  
Asn Cys Ser Trp Cys His Val Leu Gln Arg Cys Ser Ser Gly Phe Asp  
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Arg Tyr Arg Gln Glu Trp Met Asp Tyr Gly Cys Ala Gln Glu Ala Glu  
340 345 350  
Gly Arg Met Cys Glu Asp Phe Gln Asp Glu Asp His Asp Ser Ala Ser  
355 360 365  
Pro Asp Thr Ser Phe Ser Pro Tyr Asp Gly Asp Leu Thr Thr Thr Ser  
370 375 380  
Ser Ser Leu Phe Ile Asp Ser Leu Thr Thr Glu Asp Asp Thr Lys Leu  
385 390 395 400  
Asn Pro Tyr Ala Gly Gly Asp Gly Leu Gln Asn Asn Leu Ser Pro Lys  
405 410 415  
Thr Lys Gly Thr Pro Val His Leu Gly Thr Ile Val Gly Ile Val Leu  
420 425 430  
Ala Val Leu Leu Val Ala Ala Ile Ile Leu Ala Gly Ile Tyr Ile Asn  
435 440 445  
Gly His Pro Thr Ser Asn Ala Ala Leu Phe Phe Ile Glu Arg Arg Pro  
450 455 460  
His His Trp Pro Ala Met Lys Phe Arg Ser His Pro Asp His Ser Thr  
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<210> 231  
<211> 5540  
<212> DNA  
<213> Homo sapiens

<400> 231  
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tgccaggagg agacacttac atgcatgaag gatttgaaag ggccagtgag cagattttatt 540  
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 <212> PRT  
 <213> Homo sapiens

<400> 232																	
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			20					25				30					
Glu	Asp	Gly	Gly	Pro	Ala	Cys	Tyr	Gly	Gly	Phe	Asp	Leu	Tyr	Phe	Ile		
		35					40					45					
Leu	Asp	Lys	Ser	Gly	Ser	Val	Leu	His	His	Trp	Asn	Glu	Ile	Tyr	Tyr		
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Phe	Val	Glu	Gln	Leu	Ala	His	Lys	Phe	Ile	Ser	Pro	Gln	Leu	Arg	Met		
65					70				75						80		
Ser	Phe	Ile	Val	Phe	Ser	Thr	Arg	Gly	Thr	Thr	Leu	Met	Lys	Leu	Thr		
			85					90					95				
Glu	Asp	Arg	Glu	Gln	Ile	Arg	Gln	Gly	Leu	Glu	Glu	Leu	Gln	Lys	Val		
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Leu	Pro	Gly	Gly	Asp	Thr	Tyr	Met	His	Glu	Gly	Phe	Glu	Arg	Ala	Ser		
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Glu	Gln	Ile	Tyr	Tyr	Glu	Asn	Arg	Gln	Gly	Tyr	Arg	Thr	Ala	Ser	Val		
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Ile	Ile	Ala	Leu	Thr	Asp	Gly	Glu	Leu	His	Glu	Asp	Leu	Phe	Phe	Tyr		
145					150				155						160		
Ser	Glu	Arg	Glu	Ala	Asn	Arg	Ser	Arg	Asp	Leu	Gly	Ala	Ile	Val	Tyr		
			165					170					175				
Cys	Val	Gly	Val	Lys	Asp	Phe	Asn	Glu	Thr	Gln	Leu	Ala	Arg	Ile	Ala		
			180					185					190				
Asp	Ser	Lys	Asp	His	Val	Phe	Pro	Val	Asn	Asp	Gly	Phe	Gln	Ala	Leu		
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Gln	Gly	Ile	Ile	His	Ser	Ile	Leu	Lys	Lys	Ser	Cys	Ile	Glu	Ile	Leu		
		210				215					220						
Ala	Ala	Glu	Pro	Ser	Thr	Ile	Cys	Ala	Gly	Glu	Ser	Phe	Gln	Val	Val		
225					230				235						240		

Val Arg Gly Asn Gly Phe Arg His Ala Arg Asn Val Asp Arg Val Leu  
 245 250 255  
 Cys Ser Phe Lys Ile Asn Asp Ser Val Thr Leu Asn Glu Lys Pro Phe  
 260 265 270  
 Ser Val Glu Asp Thr Tyr Leu Leu Cys Pro Ala Pro Ile Leu Lys Glu  
 275 280 285  
 Val Gly Met Lys Ala Ala Leu Gln Val Ser Met Asn Asp Gly Leu Ser  
 290 295 300  
 Phe Ile Ser Ser Ser Val Ile Ile Thr Thr Thr His Cys Ser Asp Gly  
 305 310 315 320  
 Ser Ile Leu Ala Ile Ala Leu Leu Ile Leu Phe Leu Leu Leu Ala Leu  
 325 330 335  
 Ala Leu Leu Trp Trp Phe Trp Pro Leu Cys Cys Thr Val Ile Ile Lys  
 340 345 350  
 Glu Val Pro Pro Pro Pro Ala Glu Glu Ser Glu Glu Glu Asp Asp Asp  
 355 360 365  
 Gly Leu Pro Lys Lys Lys Trp Pro Thr Val Asp Ala Ser Tyr Tyr Gly  
 370 375 380  
 Gly Arg Gly Val Gly Gly Ile Lys Arg Met Glu Val Arg Trp Gly Glu  
 385 390 395 400  
 Lys Gly Ser Thr Glu Glu Gly Ala Lys Leu Glu Lys Ala Lys Asn Ala  
 405 410 415  
 Arg Val Lys Met Pro Glu Gln Glu Tyr Glu Phe Pro Glu Pro Arg Asn  
 420 425 430  
 Leu Asn Asn Asn Met Arg Arg Pro Ser Ser Pro Arg Lys Trp Tyr Ser  
 435 440 445  
 Pro Ile Lys Gly Lys Leu Asp Ala Leu Trp Val Leu Leu Arg Lys Gly  
 450 455 460  
 Tyr Asp Arg Val Ser Val Met Arg Pro Gln Pro Gly Asp Thr Gly Arg  
 465 470 475 480  
 Cys Ile Asn Phe Thr Arg Val Lys Asn Asn Gln Pro Ala Lys Tyr Pro  
 485 490 495  
 Leu Asn Asn Ala Tyr His Thr Ser Ser Pro Pro Pro Ala Pro Ile Tyr  
 500 505 510  
 Thr Pro Pro Pro Pro Ala Pro His Cys Pro Pro Pro Pro Pro Ser Ala  
 515 520 525  
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 545 550 555 560  
 Arg Pro Ser Val

<210> 233  
 <211> 5086  
 <212> DNA  
 <213> Homo sapiens

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 <221> misc\_feature  
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<400> 233  
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<212> PRT
<213> Homo sapiens

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35 40 45
Pro Pro Gly Arg Asp Gly Glu Asp Gly Pro Thr Gly Pro Pro Gly Pro
50 55 60
Pro Gly Pro Pro Gly Pro Pro Gly Leu Gly Gly Asn Phe Ala Ala Gln
65 70 75 80
Tyr Asp Gly Lys Gly Val Gly Leu Gly Pro Gly Pro Met Gly Leu Met
85 90 95
Gly Pro Arg Gly Pro Pro Gly Ala Ala Gly Ala Pro Gly Pro Gln Gly
100 105 110
Phe Gln Gly Pro Ala Gly Glu Pro Gly Glu Pro Gly Gln Thr Gly Pro
115 120 125
Ala Gly Ala Arg Gly Pro Ala Gly Pro Pro Gly Lys Ala Gly Glu Asp
130 135 140
Gly His Pro Gly Lys Pro Gly Arg Pro Gly Glu Arg Gly Val Val Gly
145 150 155 160
Pro Gln Gly Ala Arg Gly Phe Pro Gly Thr Pro Gly Leu Pro Gly Phe
165 170 175
Lys Gly Ile Arg Gly His Asn Gly Leu Asp Gly Leu Lys Gly Gln Pro
180 185 190
Gly Ala Pro Gly Val Lys Gly Glu Pro Gly Ala Pro Gly Glu Asn Gly
195 200 205
Thr Pro Gly Gln Thr Gly Ala Arg Gly Leu Pro Gly Glu Arg Gly Arg
210 215 220
Val Gly Ala Pro Gly Pro Ala Gly Ala Arg Gly Ser Asp Gly Ser Val
225 230 235 240
Gly Pro Val Gly Pro Ala Gly Pro Ile Gly Ser Ala Gly Pro Pro Gly
245 250 255
Phe Pro Gly Ala Pro Gly Pro Lys Gly Glu Ile Gly Ala Val Gly Asn
260 265 270
Ala Gly Pro Ala Gly Pro Ala Gly Pro Arg Gly Glu Val Gly Leu Pro

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785					790					795					800
Ser	Gly	Ile	Ser	Gly	Pro	Pro	Gly	Pro	Pro	Gly	Pro	Ala	Gly	Lys	Glu
				805					810					815	
Gly	Leu	Arg	Gly	Pro	Arg	Gly	Asp	Gln	Gly	Pro	Val	Gly	Arg	Thr	Gly
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Glu	Val	Gly	Ala	Val	Gly	Pro	Pro	Gly	Phe	Ala	Gly	Glu	Lys	Gly	Pro
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Ser	Gly	Glu	Ala	Gly	Thr	Ala	Gly	Pro	Pro	Gly	Thr	Pro	Gly	Pro	Gln
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Gly	Leu	Leu	Gly	Ala	Pro	Gly	Ile	Leu	Gly	Leu	Pro	Gly	Ser	Arg	Gly
865					870					875					880
Glu	Arg	Gly	Leu	Pro	Gly	Val	Ala	Gly	Ala	Val	Gly	Glu	Pro	Gly	Pro
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Leu	Gly	Ile	Ala	Gly	Pro	Pro	Gly	Ala	Arg	Gly	Pro	Pro	Gly	Ala	Val
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Gly	Ser	Pro	Gly	Val	Asn	Gly	Ala	Pro	Gly	Glu	Ala	Gly	Arg	Asp	Gly
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Asn	Pro	Gly	Asn	Asp	Gly	Pro	Pro	Gly	Arg	Asp	Gly	Gln	Pro	Gly	His
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Lys	Gly	Glu	Arg	Gly	Tyr	Pro	Gly	Asn	Ile	Gly	Pro	Val	Gly	Ala	Ala
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Gly	Ala	Pro	Gly	Pro	His	Gly	Pro	Val	Gly	Pro	Ala	Gly	Lys	His	Gly
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Asn	Arg	Gly	Glu	Thr	Gly	Pro	Ser	Gly	Pro	Val	Gly	Pro	Ala	Gly	Ala
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Val	Gly	Pro	Arg	Gly	Pro	Ser	Gly	Pro	Gln	Gly	Ile	Arg	Gly	Asp	Lys
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Gly	Glu	Pro	Gly	Glu	Lys	Gly	Pro	Arg	Gly	Leu	Pro	Gly	Leu	Lys	Gly
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His	Asn	Gly	Leu	Gln	Gly	Leu	Pro	Gly	Ile	Ala	Gly	His	His	Gly	Asp
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Asp Leu Ile Cys Asp Gln Glu Arg Phe Gln Val Lys Asn Pro Pro His
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Thr Tyr Ile Gln Lys Leu Gln Ser Phe Leu Asp Pro Ser Val Thr Arg
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Lys Lys Phe Arg Arg Arg Val Gln Glu Ser Thr Lys Val Leu Arg Glu
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<400> 240

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 Met Met Gly Pro Pro Gly Thr Gly Phe His Gly Ser Thr Val Ser Ser  
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Lys Ser Ser Ile Lys Ala Ala Val Pro Gly Asn Thr Ser Thr Pro Ser
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His Thr Cys Val Thr Phe Leu Glu Arg Thr Asp Glu Asp Ser Tyr Ile
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Gly Ile Val Val His Glu Leu Gly His Val Val Gly Phe Trp His Glu
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Lys Tyr Glu Val Asn Gly Val Lys Pro Pro Ile Gly Gln Arg Thr Arg
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Leu Ser Lys Gly Asp Ile Ala Gln Ala Arg Lys Leu Tyr Lys Cys Pro

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<211> 818

<212> PRT

<213> Homo sapiens

<400> 246

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Thr Leu Pro Pro Pro Gln Pro Pro Thr Val Asn	Leu Ser Ala Ser Ser	
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Pro Gln Ser Thr Glu Ala Pro Met Leu Asp Gly	Met Ser Pro Gly Glu	
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Ser Met Ser Thr Asp Leu Val His Phe Asp Ile	Pro Ser Ile His Ile	
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Glu Leu Gly Ser Thr Leu Arg Leu Ser Pro Leu	Glu His Met Arg Arg	
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 <212> DNA  
 <213> Homo sapiens

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 <212> PRT  
 <213> Homo sapiens

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 35          40          45
Cys Glu Val Thr Tyr Asp Lys Thr Pro Leu Glu Lys Asp Gly Ile Thr
 50          55          60
Val Val Asp Trp Pro Phe Asp Asp Gly Ala Pro Pro Pro Gly Lys Val
 65          70          75          80
Val Glu Asp Trp Leu Ser Leu Val Lys Ala Lys Phe Cys Glu Ala Pro
 85          90          95
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100          105          110
Val Leu Val Ala Leu Ala Leu Ile Glu Ser Gly Met Lys Tyr Glu Asp
115          120          125
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Tyr	Ala	Leu	Asn	Gln	Thr	Arg	Phe	Glu	Tyr	Gln	Met	Ser	Leu	Glu	Pro
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Ile	Lys	Gln	Thr	Cys	Cys	Ser	Arg	Gln	His	Asn	Ser	Cys	Thr	Thr	
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Glu	Asn	Lys	Asn	Glu	Pro	Cys	Gly	Ala	Arg	Phe	Gly	Thr	Ala	Ile	Ala
				565					570					575	
Ala	Val	Lys	Asp	Leu	Asn	Leu	Asp	Gly	Phe	Asn	Asp	Ile	Val	Ile	Gly
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Ala	Pro	Leu	Glu	Asp	Asp	His	Gly	Gly	Ala	Val	Tyr	Ile	Tyr	His	Gly
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Ser	Gly	Lys	Thr	Ile	Arg	Lys	Glu	Tyr	Ala	Gln	Arg	Ile	Pro	Ser	Gly
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Gly	Asp	Gly	Lys	Thr	Leu	Lys	Phe	Phe	Gly	Gln	Ser	Ile	His	Gly	Glu
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Met	Asp	Leu	Asn	Gly	Asp	Gly	Leu	Thr	Asp	Val	Thr	Ile	Gly	Gly	Leu
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Gly	Gly	Ala	Ala	Leu	Phe	Trp	Ser	Arg	Asp	Val	Ala	Val	Val	Lys	Val
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Thr	Met	Asn	Phe	Glu	Pro	Asn	Lys	Val	Asn	Ile	Gln	Lys	Lys	Asn	Cys
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His	Met	Glu	Gly	Lys	Glu	Thr	Val	Cys	Ile	Asn	Ala	Thr	Val	Cys	Phe
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Glu	Val	Lys	Leu	Lys	Ser	Lys	Glu	Asp	Thr	Ile	Tyr	Glu	Ala	Asp	Leu
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Gln	Tyr	Arg	Val	Thr	Leu	Asp	Ser	Leu	Arg	Gln	Ile	Ser	Arg	Ser	Phe
				725					730					735	
Phe	Ser	Gly	Thr	Gln	Glu	Arg	Lys	Val	Gln	Arg	Asn	Ile	Thr	Val	Arg
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Lys	Ser	Glu	Cys	Thr	Lys	His	Ser	Phe	Tyr	Met	Leu	Asp	Lys	His	Asp
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Arg	Ser	Gln	Asn	Asp	Lys	Phe	Asn	Val	Ser	Leu	Thr	Val	Lys	Asn	Thr
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Lys	Asp	Ser	Ala	Tyr	Asn	Thr	Arg	Thr	Ile	Val	His	Tyr	Ser	Pro	Asn
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Leu	Val	Phe	Ser	Gly	Ile	Glu	Ala	Ile	Gln	Lys	Asp	Ser	Cys	Glu	Ser
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Asn	His	Asn	Ile	Thr	Cys	Lys	Val	Gly	Tyr	Pro	Phe	Leu	Arg	Arg	Gly
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Glu	Met	Val	Thr	Phe	Lys	Ile	Leu	Phe	Gln	Phe	Asn	Thr	Ser	Tyr	Leu
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Met	Glu	Asn	Val	Thr	Ile	Tyr	Leu	Ser	Ala	Thr	Ser	Asp	Ser	Glu	Glu
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Pro	Pro	Glu	Thr	Leu	Ser	Asp	Asn	Val	Val	Asn	Ile	Ser	Ile	Pro	Val
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Lys	Tyr	Glu	Val	Gly	Leu	Gln	Phe	Tyr	Ser	Ser	Ala	Ser	Glu	Tyr	His
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Ile	Ser	Ile	Ala	Ala	Asn	Glu	Thr	Val	Pro	Glu	Val	Ile	Asn	Ser	Thr
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Gly	Ser	Phe	Pro	Met	Pro	Glu	Leu	Lys	Leu	Ser	Ile	Ser	Phe	Pro	Asn

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Ile	Asn Ser Gly Lys Lys Met Thr	Thr Ser Thr Asp His Leu	Lys Arg		
	1045	1050	1055		
Gly	Thr Ile Leu Asp Cys Asn Thr	Cys Lys Phe Ala Thr Ile	Thr Cys		
	1060	1065	1070		
Asn	Leu Thr Ser Ser Asp Ile Ser	Gln Val Asn Val Ser Leu	Ile Leu		
	1075	1080	1085		
Trp	Lys Pro Thr Phe Ile Lys Ser	Tyr Phe Ser Ser Leu Asn	Leu Thr		
	1090	1095	1100		
Ile	Arg Gly Glu Leu Arg Ser Glu	Asn Ala Ser Leu Val Leu	Ser Ser		
1105	1110	1115	1120		
Ser	Asn Gln Lys Arg Glu Leu Ala	Ile Gln Ile Ser Lys Asp	Gly Leu		
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Pro	Gly Arg Val Pro Leu Trp Val	Ile Leu Leu Ser Ala Phe	Ala Gly		
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Leu	Leu Leu Leu Met Leu Leu Ile	Leu Ala Leu Trp Lys Ile	Gly Phe		
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cctggtttcg	480
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ccagggactc	600
tttacccggac	660
ggcttaagtt	720
ggagtaccag	780
ggccaaaaag	840
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cccggttttc	960
gaaaagggtg	1020
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aaagggtttc	1140
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acatctctgc	1260
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Gly	Glu	Arg	Gly	Leu	Pro	Gly	Leu	Gln	Gly	Val	Ile	Gly	Phe	Pro	Gly
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Met	Gln	Gly	Pro	Glu	Gly	Pro	Gln	Gly	Pro	Pro	Gly	Gln	Lys	Gly	Asp
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Gly	Ala	Ser	Gly	Tyr	Pro	Gly	Asn	Pro	Gly	Leu	Pro	Gly	Ile	Pro	Gly
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Gln	Asp	Gly	Pro	Pro	Gly	Pro	Pro	Gly	Ile	Pro	Gly	Cys	Asn	Gly	Thr
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Lys	Gly	Glu	Arg	Gly	Pro	Leu	Gly	Pro	Pro	Gly	Leu	Pro	Gly	Phe	Ala
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Thr	Gly	Pro	Leu	Gly	Glu	Lys	Gly	Glu	Arg	Gly	Tyr	Pro	Gly	Thr	Pro
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Met	Gly	Val	Met	Gly	Thr	Pro	Gly	Gln	Pro	Gly	Ser	Pro	Gly	Pro	Val
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Val	Gly	Leu	Pro	Gly	Lys	Pro	Gly	Ser	Met	Asp	Lys	Val	Asp	Met	Gly
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Pro	Ile	Gly	Glu	Lys	Gly	Ser	Arg	Gly	Asp	Pro	Gly	Thr	Pro	Gly	Val

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Pro	Gly	Ser	Asp	Gly	Ile	Pro	Gly	Ser	Ala	Gly	Glu	Lys	Gly	Glu	Pro
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 Thr Ala Gly Ser Cys Leu Arg Lys Phe Ser Thr Met Pro Phe Leu Phe  
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 <213> Homo sapiens

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<400> 254

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Ile	Ile	Ala	Asp	Ile	Phe	Glu	Tyr	Thr	Ala	Lys	His	Met	Pro	Lys	Phe
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 <212> PRT  
 <213> Homo sapiens

<400> 257

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Phe	Lys	Ile	Ile	Asp	Glu	Asn	Thr	Val	His	Met	Ser	Trp	Ala	Glu	Pro
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Tyr	Asp	Glu	Val	Glu	Glu	Ser	Val	Pro	Val	Ile	Gly	Gln	Leu	Thr	Ile
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 <212> DNA  
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<400> 262

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<400> 263

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 <213> Homo sapiens

<400> 265

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Tyr	Asp	Gly	Lys	Gly	Val	Gly	Leu	Gly	Pro	Gly	Pro	Met	Gly	Leu	Met
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Ala	Gly	Ala	Arg	Gly	Pro	Ala	Gly	Pro	Pro	Gly	Lys	Ala	Gly	Glu	Asp
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			210					215						220	
Val	Gly	Ala	Pro	Gly	Pro	Ala	Gly	Ala	Arg	Gly	Ser	Asp	Gly	Ser	Val
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Phe	Pro	Gly	Ala	Pro	Gly	Pro	Lys	Gly	Glu	Ile	Gly	Ala	Val	Gly	Asn
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Gln	Gly	Pro	Pro	Gly	Pro	Ser	Gly	Glu	Glu	Gly	Lys	Arg	Gly	Pro	Asn
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Pro	Lys	Gly	Pro	Thr	Gly	Asp	Pro	Gly	Lys	Asn	Gly	Asp	Lys	Gly	His
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Gly	Glu	Phe	Gly	Leu	Pro	Gly	Pro	Ala	Gly	Pro	Arg	Gly	Glu	Arg	Gly
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Arg	Gly	Pro	Ser	Gly	Pro	Pro	Gly	Pro	Asp	Gly	Asn	Lys	Gly	Glu	Pro
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Gly	Val	Val	Gly	Ala	Val	Gly	Thr	Ala	Gly	Pro	Ser	Gly	Pro	Ser	Gly
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Leu	Pro	Gly	Glu	Arg	Gly	Ala	Ala	Gly	Ile	Pro	Gly	Gly	Lys	Gly	Glu
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Lys	Gly	Glu	Pro	Gly	Leu	Arg	Gly	Glu	Ile	Gly	Asn	Pro	Gly	Arg	Asp
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Gly	Ala	Arg	Gly	Ala	His	Gly	Ala	Val	Gly	Ala	Pro	Gly	Pro	Ala	Gly
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Ala	Thr	Gly	Asp	Arg	Gly	Glu	Ala	Gly	Ala	Ala	Gly	Pro	Ala	Gly	Pro
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Ala	Gly	Pro	Arg	Gly	Ser	Pro	Gly	Glu	Arg	Gly	Glu	Val	Gly	Pro	Ala
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 Glu Met Ala Thr Gln Leu Ala Phe Met Arg Leu Leu Ala Asn Tyr Ala  
 1250 1255 1260  
 Ser Gln Asn Ile Thr Tyr His Cys Lys Asn Ser Ile Ala Tyr Met Asp  
 1265 1270 1275 1280  
 Glu Glu Thr Gly Asn Leu Lys Lys Ala Val Ile Leu Gln Gly Ser Asn  
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 Asp Val Glu Leu Val Ala Glu Gly Asn Ser Arg Phe Thr Tyr Thr Val  
 1300 1305 1310  
 Leu Val Asp Gly Cys Ser Lys Lys Thr Asn Glu Trp Gly Lys Thr Ile  
 1315 1320 1325  
 Ile Glu Tyr Lys Thr Asn Lys Pro Ser Arg Leu Pro Phe Leu Asp Ile  
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 <212> DNA  
 <213> Homo sapiens

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<210> 267  
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 <212> PRT  
 <213> Homo sapiens

<400> 267

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Ala	Leu	Lys	Ala	Thr	His	Cys	Leu	Ala	Ala	Thr	His	Trp	Ser	Pro	Ser
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Cys	Pro	Pro	Gln	Gln	Val	Phe	Gly	Asp	Leu	Asp	Gln	Val	Arg	Met	Thr
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Lys	Asp	Ala	Cys	Ser	Arg	Val	Arg	Ser	Gly	Arg	Ala	Arg	Val	Glu	Asp
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Phe	Tyr	Thr	Val	Glu	Thr	Val	Ser	Ser	Gly	Thr	Asp	Cys	Arg	Cys	Ser
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Val	His	Ala	Tyr	Val	His	Lys	Val	Ala	Ser	Gln	Met	Asn	Thr	Leu	Glu
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Glu	Ser	Ile	Lys	Ala	Asn	Leu	Ser	Arg	Glu	Asn	Glu	Val	Val	Lys	Asp
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Ser	Val	Arg	His	Leu	Ser	Glu	Gln	Leu	Arg	His	Tyr	Glu	Asn	His	Ser
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Thr	Gly	Ser	Lys	Ala	Gln	Asp	Thr	Ala	Arg	Gly	Lys	Gly	Lys	Asp	Ile
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Ser	Lys	Tyr	Gly	Ser	Val	Gln	Lys	Ser	Phe	Ala	Asp	Arg	Gly	Leu	Pro
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Lys	Pro	Pro	Lys	Glu	Lys	Leu	Leu	Gln	Val	Glu	Lys	Leu	Arg	Lys	Glu
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Glu	Arg	Val	Asp	Leu	Ala	Ser	Gly	Thr	Pro	Thr	Ser	Ile	Pro	Ala	Thr
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Thr	Thr	Thr	Ala	Thr	Thr	Thr	Pro	Thr	Pro	Thr	Thr	Ser	Leu	Leu	Pro
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Thr	Glu	Pro	Pro	Ser	Gly	Pro	Glu	Val	Ser	Ser	Gln	Gly	Arg	Glu	Ala
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Ser	Cys	Glu	Gly	Thr	Leu	Arg	Ala	Val	Asp	Pro	Pro	Val	Arg	His	His
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Ser Tyr Gly Arg His Glu Gly Ala Trp Met Lys Asp Pro Ala Ala Arg  
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Asp Asp Arg Ile Tyr Val Thr Asn Tyr Tyr Tyr Gly Asn Ser Leu Val  
450 455 460  
Glu Phe Arg Asn Leu Glu Asn Phe Lys Gln Gly Arg Trp Ser Asn Met  
465 470 475 480  
Tyr Lys Leu Pro Tyr Asn Trp Ile Gly Thr Gly His Val Val Tyr Gln  
485 490 495  
Gly Ala Phe Tyr Tyr Asn Arg Ala Phe Thr Lys Asn Ile Ile Lys Tyr  
500 505 510  
Asp Leu Arg Gln Arg Phe Val Ala Ser Trp Ala Leu Leu Pro Asp Val  
515 520 525  
Val Tyr Glu Asp Thr Thr Pro Trp Lys Trp Arg Gly His Ser Asp Ile  
530 535 540  
Asp Phe Ala Val Asp Glu Ser Gly Leu Trp Val Ile Tyr Pro Ala Val  
545 550 555 560  
Asp Asp Arg Asp Glu Ala Gln Pro Glu Val Ile Val Leu Ser Arg Leu  
565 570 575  
Asp Pro Gly Asp Leu Ser Val His Arg Glu Thr Thr Trp Lys Thr Arg  
580 585 590  
Leu Arg Arg Asn Ser Tyr Gly Asn Cys Phe Leu Val Cys Gly Ile Leu  
595 600 605  
Tyr Ala Val Asp Thr Tyr Asn Gln Gln Glu Gly Gln Val Ala Tyr Ala  
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Phe Asp Thr His Thr Gly Thr Asp Ala Arg Pro Gln Leu Pro Phe Leu  
625 630 635 640  
Asn Glu His Ala Tyr Thr Thr Gln Ile Asp Tyr Asn Pro Lys Glu Arg  
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tatgtgactc	atgcttctgg	ataaataaag	caccaaatat	gtatctgtaa	ccacaatcac	1860
acatatata	ttaaatatat	atctatataa	caaaaaaaaa	aaaaaaaaa		1909

<210> 269  
 <211> 83  
 <212> PRT  
 <213> Homo sapiens

<400> 269

Met	Tyr	Gly	Asn	Ile	Leu	Cys	Pro	Thr	Leu	His	Thr	Leu	Cys	Thr	Gln
1				5					10					15	
Ile	Leu	Tyr	Cys	Met	Asn	Tyr	Ala	Leu	Ser	Arg	Ile	Gln	Cys	Gln	Gly
			20					25					30		
Glu	Leu	Gly	Glu	Ile	Asn	Tyr	Phe	Asn	Phe	Phe	Phe	Ile	Leu	Tyr	Lys
		35					40					45			
Ala	Met	Asp	Phe	Ile	Trp	Leu	Met	Cys	Ala	Leu	Tyr	Thr	Ser	His	Phe
	50					55					60				
Asn	Arg	Met	Glu	Leu	Leu	Ile	Ile	Phe	Gln	Arg	Val	Ile	Asp	Met	Gln
65				70					75					80	
Lys	Phe	Gln													

<210> 270  
 <211> 1720  
 <212> DNA  
 <213> Homo sapiens

<400> 270

gactgcagat	gaaattagta	actgggtgggg	tcgtgggggtg	tgaatgggtgg	gcggggagcag	60
ctatgtcagt	tggtgtgttt	ctgcttatgt	tagggtaatt	gggcacggcc	tttgtgtaac	120
tggtgaatat	ctctgaacct	gggcatgaaa	cagagagatg	tcctaaactct	gggtgagagg	180
aatcctcatt	tttctctgcc	ctctcactgt	ggcctcctaa	gaaaaaagtt	ttgggttcct	240
gcagcatgaa	ggagagctct	gctcccagaa	tttgggagct	ccagatttct	tccaggggtg	300
ggaggcatca	atatatcagt	ctgggaaagg	ggttcctggg	ccactccagg	agctgagttg	360
ggtggaaggt	gctgagagtg	tgggtggggg	ccacttctga	gcacccatgt	ggcaccact	420
gctggctcct	gtttgtggct	gggcactcag	gaaaatgttt	ttgggtgctaa	gagtaaaaag	480
ccaaccaaca	aacacatctc	ttttttctgt	ctattcactg	gaaagtaaaa	gcagtctggg	540
cgcaggctgg	ggacccagat	ggaattcaaa	cttatgcctg	ctctcaaggt	gctcacgggt	600
gctgataaac	agctggataa	aatgaagagt	ctatgagtga	gggatgcaga	gccagggaag	660
gctggtgagg	tgatgccacc	agcacagggg	tatgagtttg	cagctgccaa	ggggccaagg	720
gatgagctgg	ggccctcctt	cccaatggca	tctccccctg	gtctggaact	gaagacactg	780
agcaatggtc	cccaagcccc	aaggagatca	gctccccctg	gccagtggtg	cccaaccagg	840
gagggtgtgg	agaatgcctg	cttctcctca	gaggagcatg	agacccattt	ccagaacctt	900
gggaacacga	gactgggcag	ctcaccctgt	ccccctgggg	gtgtctctct	actgccccga	960
tcccagcggg	atgatctgtc	ccttcattca	gaggaggggc	cagccctgga	gcccgtgagc	1020
cgcccgggtg	attatggctt	tgtttccgcc	ctcgttttcc	tggtgagtg	gattcttctg	1080
gtggtgacag	catacgccat	ccccctgtag	gctcgagtca	atccggacac	agtgcagcgc	1140
cgggagatgg	aacgactgga	gatgtactac	gcccgcctag	gctcccacct	ggacaggtgc	1200
atcatcgcat	gcctcgggct	gctcacgggt	ggcggcatgc	tcttgctcgt	gctgctcatg	1260
gtctccctgt	gcaagggcga	gctgtaccgc	cggaggacct	tcgtccccgg	caagggtctc	1320
aggaagacct	acggctccat	taacctgcgc	atgagacagc	tcaatgggga	tggggggccag	1380
gccctgggtg	agaatgaagt	tgtccaggtc	tcagagacta	gccacacctt	ccagaggtct	1440
taagaactag	cccaccttat	ctggctgctt	tagctccagt	gctacaaggt	ccacccccctg	1500

ctcccgccca	cctgaccctt	gcccaaggccc	tgggggtttta	aactgagctc	acatagggcc	1560
ttgtggaaga	agtactgggt	gctggaggga	gagctcgggg	cccagcccat	gccccacacg	1620
ggcaagcagc	ccactgatct	gttttgttagc	tgaggttttg	catacggttt	tgtttgagg	1680
atggcttctg	ctgctaataaa	tacaaaagtt	tggaaccgc			1720

<210> 271  
 <211> 256  
 <212> PRT  
 <213> Homo sapiens

<400> 271

Met	Pro	Pro	Ala	Gln	Gly	Tyr	Glu	Phe	Ala	Ala	Ala	Lys	Gly	Pro	Arg
1				5					10					15	
Asp	Glu	Leu	Gly	Pro	Ser	Phe	Pro	Met	Ala	Ser	Pro	Pro	Gly	Leu	Glu
		20						25					30		
Leu	Lys	Thr	Leu	Ser	Asn	Gly	Pro	Gln	Ala	Pro	Arg	Arg	Ser	Ala	Pro
		35					40					45			
Leu	Gly	Pro	Val	Ala	Pro	Thr	Arg	Glu	Gly	Val	Glu	Asn	Ala	Cys	Phe
	50					55					60				
Ser	Ser	Glu	Glu	His	Glu	Thr	His	Phe	Gln	Asn	Pro	Gly	Asn	Thr	Arg
	65				70					75					80
Leu	Gly	Ser	Ser	Pro	Ser	Pro	Pro	Gly	Gly	Val	Ser	Ser	Leu	Pro	Arg
			85					90						95	
Ser	Gln	Arg	Asp	Asp	Leu	Ser	Leu	His	Ser	Glu	Glu	Gly	Pro	Ala	Leu
			100					105					110		
Glu	Pro	Val	Ser	Arg	Pro	Val	Asp	Tyr	Gly	Phe	Val	Ser	Ala	Leu	Val
		115					120						125		
Phe	Leu	Val	Ser	Gly	Ile	Leu	Leu	Val	Val	Thr	Ala	Tyr	Ala	Ile	Pro
	130					135					140				
Arg	Glu	Ala	Arg	Val	Asn	Pro	Asp	Thr	Val	Thr	Ala	Arg	Glu	Met	Glu
	145				150					155					160
Arg	Leu	Glu	Met	Tyr	Ala	Arg	Leu	Gly	Ser	His	Leu	Asp	Arg	Cys	
			165					170					175		
Ile	Ile	Ala	Gly	Leu	Gly	Leu	Leu	Thr	Val	Gly	Gly	Met	Leu	Leu	Ser
			180					185					190		
Val	Leu	Leu	Met	Val	Ser	Leu	Cys	Lys	Gly	Glu	Leu	Tyr	Arg	Arg	Arg
	195						200					205			
Thr	Phe	Val	Pro	Gly	Lys	Gly	Ser	Arg	Lys	Thr	Tyr	Gly	Ser	Ile	Asn
	210					215					220				
Leu	Arg	Met	Arg	Gln	Leu	Asn	Gly	Asp	Gly	Gly	Gln	Ala	Leu	Val	Glu
	225				230					235					240
Asn	Glu	Val	Val	Gln	Val	Ser	Glu	Thr	Ser	His	Thr	Leu	Gln	Arg	Ser
			245					250						255	

<210> 272  
 <211> 1111  
 <212> DNA  
 <213> Homo sapiens

<400> 272

ccgcgcgctc	gccccgcgc	tcctgctgca	gccccaggcc	cctcgccgcc	gccaccatgg	60
acgccatcaa	gaagaagatg	cagatgctga	agctcgacaa	ggagaacgcc	ttggatcgag	120
ctgagcaggc	ggaggccgac	aagaaggcgg	cggaagacag	gagcaagcag	ctggaagatg	180
agctgggtgtc	actgcaaaaag	aaactcaagg	gcaccgaaga	tgaactggac	aaatactctg	240
aggctctcaa	agatgcccgag	gagaagctgg	agctggcaga	gaaaaaggcc	accgatgctg	300
aagccgacgt	agcttctctg	aacagacgca	tccagctggg	tgaggaagag	ttggatcggtg	360
cccaggagcg	tctggcaaca	gctttgcaga	agctggagga	agctgagaag	gcagcagatg	420
agagtgaag	aggcatgaaa	gtcatttgaga	gtcgagccca	aaaagatgaa	gaaaaaatgg	480
aaattcagga	gatccaactg	aaagaggcca	agcacattgc	tgaagatgcc	gaccgcaaat	540
acgaagaggt	ggcccgtaa	ctgggtcatca	ttgagagcga	cctggaacgt	gcagaggagc	600
gggctgagct	ctcagaaggc	aaatgtgccg	agcttgaaga	agaattgaaa	actgtgacga	660

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acaacttgaa gtcactggag gctcaggctg agaagtactc gcagaaggaa gacagatatg      720
aggaagagat caaggtcctt tccgacaagc tgaaggaggc tgagactcgg gctgagtttg      780
cggagaggtc agtaactaaa ttggagaaaa gcattgatga cttagaagac gagctgtacg      840
ctcagaaact gaagtacaaa gccatcagcg aggagctgga ccacgctctc aacgatatga      900
cttccatata agtttctttg cttcacttct cccaagactc cctcgtcgag ctggatgtcc      960
cacctctctg agctctgcat ttgtctattc tccagctgac cctggttctc tctcttagca     1020
tcctgcctta gagccaggca cacactgtgc tttctattgt acagaagctc ttcgtttcag     1080
tgtcaaataa acactgtgta agctaaaaaa a                               1111

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<210> 273
<211> 284
<212> PRT
<213> Homo sapiens

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<400> 273
Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu
1      5      10      15
Asn Ala Leu Asp Arg Ala Glu Gln Ala Ala Asp Lys Lys Ala Ala
20     25     30
Glu Asp Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ser Leu Gln Lys
35     40     45
Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu
50     55     60
Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp
65     70     75     80
Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu
85     90     95
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys
100    105    110
Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys
115    120    125
Val Ile Glu Ser Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln
130    135    140
Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg
145    150    155    160
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu
165    170    175
Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu
180    185    190
Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu
195    200    205
Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Arg Tyr Glu Glu Glu
210    215    220
Ile Lys Val Leu Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu
225    230    235    240
Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu
245    250    255
Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu
260    265    270
Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile
275    280

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<210> 274
<211> 2032
<212> DNA
<213> Homo sapiens

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<400> 274
caccgccgag cccggcctcg gcctccgcgc cttgttgctg cgccccgcc gcgagccgcg      60
cccgcacgtc ccccgccggc ggccaccatg agcacaggcc tgcggtacaa gagcaagctg     120
gcgaccccgag aggacaagca ggacattgac aagcagtagc tgggcttcgc cacactgccc     180

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aaccaggtgc accgcaagtc ggtgaagaaa ggctttgact tcacactcat ggtggctggg 240
gagtcaggcc tggggaagtc cacactggtc cacagcctct tcctgacaga cttgtacaag 300
gaccggaagc tgctcagtcg tgaggagcgc atcagccaga cggtagagat tctaaaacac 360
acggtggaca ttgaggagaa gggagtcaag ctgaagctca ccatcgtgga cacgccggga 420
ttcggggacg ctgtcaacaa caccgagtcg tgggaagcca tcaccgacta tgtggaccag 480
cagtttgagc agtacttccg tgatgagagc ggccctcaacc gaaagaacat ccaagacaac 540
cgagtgcact gctgcctata cttcatctcc cccttcgggc atgggctgcg gccagtggat 600
gtgggtttca tgaaggcatt gcatgagaag gtcaacatcg tgcctctcat cgccaaagct 660
gactgtcttg tccccagtga gatccggaag ctgaaggagc ggatccggga ggagattgac 720
aagtttgga tccatgtata ccagttccct gagtgtgact cggacgagga tgaggacttc 780
aagcagcagg accgggaact gaaggagagc gcgcctctcg ccgttatagg cagcaacacg 840
gtggtggagg ccaaggggca gcgggtccgg ggccgactgt acccctgggg gatcgtggag 900
gtggagaacc aggcgcattg cgacttcgtg aagctgcgca acatgctcat ccgcacgcat 960
atgcacgacc tcaaggacgt gacgtgcgac gtgcactacg agaactaccg cgcgactgc 1020
atccagcaga tgaccagcaa actgaccagc gacagccgca tggagagccc catcccgatc 1080
ctgccgctgc ccaccccgga cgccgagact gagaagctta tcaggatgaa ggatgaggaa 1140
ctgaggcgca tgcaggagat gctgcagagg atgaagcagc agatgcagga ccagtgcgc 1200
tcgccgcgga cacacggtcc gtctccggga cgccctcgca ccctggaca ccagaccgga 1260
ctgttccgca cccggagacg cggggccaca gccccagct gaccctaatt tattctcagc 1320
accaccccct cccaggtcat tgtgtctgtt tccgaggggc ctggaccgta gcccccgccc 1380
agctggccct ctctgacctt gggggatcag gagcgaagtt gggcgggact tcagagatcc 1440
gcctcccttg cccttcccc gcccccgac ggtcacagca cccaaaccgc aggcctgtct 1500
ctggcaggca ggcaaagcta ggcagaagag gattcccagg atcctgggtc tgttccctgc 1560
cccagtgtcg cagaacggac ttgggagccc tcctttgcct gctcccgcg gtcaccagc 1620
gagtgtctgag accccatttt ctgtcgaggc gggccgagtc ttcccttatc cccagacgcc 1680
tagcgggcag ggttgggctg aatcaaattg gagccctcca gacataagga ggccagaggc 1740
tgcaaggagc ggggtcgtga ccgcttacac cccttctcca cagcccgccc cgacctggag 1800
ggccccggg gcactgggag gtgagccacc tcctggcaac tctcggtgcc gtcccctgcc 1860
ctcgtctgag gcctcttctc cccagcaccg ctgtgggtgt cgggatact gagcctaggc 1920
ctccccgatg tccccccgc atgatccctt cccgccacac gatgtccgt tttcttcctg 1980
tgtgaatgcc gcgtcctgtc ctggtgacag gagaacaatg ttggtgaacg tc 2032

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<210> 275
<211> 369
<212> PRT
<213> Homo sapiens

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<400> 275
Met Ser Thr Gly Leu Arg Tyr Lys Ser Lys Leu Ala Thr Pro Glu Asp
 1          5          10          15
Lys Gln Asp Ile Asp Lys Gln Tyr Val Gly Phe Ala Thr Leu Pro Asn
 20          25          30
Gln Val His Arg Lys Ser Val Lys Gly Phe Asp Phe Thr Leu Met
 35          40          45
Val Ala Gly Glu Ser Gly Leu Gly Lys Ser Thr Leu Val His Ser Leu
 50          55          60
Phe Leu Thr Asp Leu Tyr Lys Asp Arg Lys Leu Leu Ser Ala Glu Glu
 65          70          75          80
Arg Ile Ser Gln Thr Val Glu Ile Leu Lys His Thr Val Asp Ile Glu
 85          90          95
Glu Lys Gly Val Lys Leu Lys Leu Thr Ile Val Asp Thr Pro Gly Phe
100          105          110
Gly Asp Ala Val Asn Asn Thr Glu Cys Trp Lys Pro Ile Thr Asp Tyr
115          120          125
Val Asp Gln Gln Phe Glu Gln Tyr Phe Arg Asp Glu Ser Gly Leu Asn
130          135          140
Arg Lys Asn Ile Gln Asp Asn Arg Val His Cys Cys Leu Tyr Phe Ile
145          150          155          160
Ser Pro Phe Gly His Gly Leu Arg Pro Val Asp Val Gly Phe Met Lys
165          170          175
Ala Leu His Glu Lys Val Asn Ile Val Pro Leu Ile Ala Lys Ala Asp

```



<400> 277  
Met Lys Ile Ser Val Ala Ala Ile Pro Phe Phe Leu Leu Ile Thr Ile  
1 5 10 15  
Ala Leu Gly Thr Lys Thr Glu Ser Ser Ser Arg Gly Pro Tyr His Pro  
20 25 30  
Ser Glu Cys Cys Phe Thr Tyr Thr Thr Tyr Lys Ile Pro Arg Gln Arg  
35 40 45  
Ile Met Asp Tyr Tyr Glu Thr Asn Ser Gln Cys Ser Lys Pro Gly Ile  
50 55 60  
Val Phe Ile Thr Lys Arg Gly His Ser Val Cys Thr Asn Pro Ser Asp  
65 70 75 80  
Lys Trp Val Gln Asp Tyr Ile Lys Asp Met Lys Glu Asn  
85 90

<210> 278  
<211> 1344  
<212> DNA  
<213> Homo sapiens

<400> 278  
tgcagactga tatggattca ccactgctaa cacctcctgg ttggaactac aggaatagaa 60  
ctggaaaggg aaaaaaggca gcattcacca catcccaatc ctgaatccaa gagtctaaga 120  
tagtcccca ctctatctc aggcttagag gattagatta atctcctgga gggaagactc 180  
ttccttgaaa catttttttt tatctgcctg tagctattgg gataattcgg gaaatccaca 240  
gggacagttc aagtcattct tgcctctac ttctgttgc actctcagcc ttgttctctt 300  
tttagaaact gcatggtaac tattatatag cttaaagaaga gcattctgac ctctgccctg 360  
ggacttcctg gatcctcttc ttcttataaa tacaagggca gagctggtat cccggggagc 420  
caggaagcag tgagcccagg agtctctggc cagccctgcc tgcccaccag gaggatgaag 480  
gtctccgtgg ctgcccctct ctgcctcatg cttgttgctg tccttggatc ccaggcccag 540  
ttcacaaatg atgcagagac agagttaatg atgtcaaagc ttccactgga aaatccagta 600  
gttctgaaca gcttttcact tgctgctgac tgcgtcacct cctacatctc acaaagcatc 660  
ccgtgttcac tcatgaaaag ttattttgaa acgagcagcg agtgctccaa gccaggtgtc 720  
atattcctca ccaagaaggg gcggcaagtc tgtgccaaac ccagtgttcc gggagttcag 780  
gattgcatga aaaagctgaa gccctactca atataataat aaagagacaa aagaggccag 840  
ccaccacact ccaacacctc ctgagcctct gaagctccca ccaggccagc tctcctccca 900  
caacagcttc ccacagcatg aagatctcgg tggctgccat tcccttcttc ctctcatca 960  
ccatcgccct agggaccaag actgaatcct cctcacgggg accttaccac cctcagagt 1020  
gctgcttcac ctacactacc tacaagatcc cgcgtcagcg gattatggat tactatgaga 1080  
ccaacagcca gtgctccaag cccggaattg tcttcatcac caaaaggggc cattccgtct 1140  
gtaccaaccc cagtgacaag tgggtccagg actatatcaa ggacatgaag gagaactgag 1200  
tgaccagaa ggggtggcga aggcacagct cagagacata aagagaagat gccaaggccc 1260  
ctcctccac ccaccgctaa ctctcagccc cagtcaccct cttggagctt cctgctttg 1320  
aattaaagac cactcatgct ctcc 1344

<210> 279  
<211> 93  
<212> PRT  
<213> Homo sapiens

<400> 279  
Met Lys Ile Ser Val Ala Ala Ile Pro Phe Phe Leu Leu Ile Thr Ile  
1 5 10 15  
Ala Leu Gly Thr Lys Thr Glu Ser Ser Ser Arg Gly Pro Tyr His Pro  
20 25 30  
Ser Glu Cys Cys Phe Thr Tyr Thr Thr Tyr Lys Ile Pro Arg Gln Arg  
35 40 45  
Ile Met Asp Tyr Tyr Glu Thr Asn Ser Gln Cys Ser Lys Pro Gly Ile  
50 55 60  
Val Phe Ile Thr Lys Arg Gly His Ser Val Cys Thr Asn Pro Ser Asp  
65 70 75 80  
Lys Trp Val Gln Asp Tyr Ile Lys Asp Met Lys Glu Asn



<210> 280  
 <211> 1344  
 <212> DNA  
 <213> Homo sapiens

<400> 280  
 tgcagactga tatggattca ccactgctaa cacctcctgg ttggaactac aggaatagaa 60  
 ctggaaaggg aaaaaaggca gcattcacca catcccaatc ctgaatccaa gagtctaaga 120  
 tagtccccca ctccatctctc aggccttagag gattagatta atctcctgga gggaagactc 180  
 ttcccttgaaa cattttttttt tatctgcctg tagctattgg gataattcgg gaaatccaca 240  
 gggacagttc aagtcattctt tgtcctctac tttctgttg actctcagcc ttgttctctt 300  
 tttagaaact gcatggtaac tattatatag ctaaagaaga gcattctgac ctctgccctg 360  
 ggacttctctg gatcctcctc ttcttataaa tacaagggca gagctggtat cccggggagc 420  
 caggaagcag tgagcccagg agtcctcggc cagccctgcc tgcccaccag gaggatgaag 480  
 gtctccgtgg ctgcccctctc ctgcctcatg cttgttgctg tccttggtat ccaggcccag 540  
 ttcacaaatg atgcagagac agagttaatg atgtcaaagc ttccactgga aaatccagta 600  
 gttctgaaca gctttcactt tgcgtctgac tgcgtcacct cctacatctc acaaagcatc 660  
 ccgtgttcac tcatgaaaag ttattttgaa acgagcagcg agtgctccaa gccaggtgtc 720  
 atattcctca ccaagaaggg gcggcaagtc tgtgccaaac ccagtgtcc gggagttcag 780  
 gattgcatga aaaagctgaa gcctactca atataataat aaagagacaa aagaggccag 840  
 ccacccacct ccaacacctc ctgagcctct gaagctccca ccaggccagc tctcctcca 900  
 caacagcttc ccacagcatg aagatctccg tggctgccat tcccttcttc ctctcatca 960  
 ccatcgccct agggaccaag actgaatcct cctcacgggg accttaccac ccctcagagt 1020  
 gctgcttcac ctacactacc tacaagatcc cgcgtcagcg gattatggat tactatgaga 1080  
 ccaacagcca gtgctccaag cccggaattg tcttcatcac caaaaggggc cattccgtct 1140  
 gtaccaaccc cagtgacaag tgggtccagg actatatcaa ggacatgaag gagaactgag 1200  
 tgaccagaa ggggtggcga aggcacagct cagagacata aagagaagat gccaaagccc 1260  
 cctcctccac ccacegctaa ctctcagccc cagtcacct cttggagctt ccctgctttg 1320  
 aattaaagac cactcatgct ctcc 1344

<210> 281  
 <211> 93  
 <212> PRT  
 <213> Homo sapiens

<400> 281  
 Met Lys Ile Ser Val Ala Ala Ile Pro Phe Phe Leu Leu Ile Thr Ile  
 1 5 10 15  
 Ala Leu Gly Thr Lys Thr Glu Ser Ser Arg Gly Pro Tyr His Pro  
 20 25 30  
 Ser Glu Cys Cys Phe Thr Tyr Thr Thr Tyr Lys Ile Pro Arg Gln Arg  
 35 40 45  
 Ile Met Asp Tyr Tyr Glu Thr Asn Ser Gln Cys Ser Lys Pro Gly Ile  
 50 55 60  
 Val Phe Ile Thr Lys Arg Gly His Ser Val Cys Thr Asn Pro Ser Asp  
 65 70 75 80  
 Lys Trp Val Gln Asp Tyr Ile Lys Asp Met Lys Glu Asn  
 85 90

<210> 282  
 <211> 2750  
 <212> DNA  
 <213> Homo sapiens

<400> 282  
 tacgatggca acacctccc caaggccccc aatgagttcc tgacctcggg ggtggagctc 60  
 atcggcgccg ccaaggccct gctggcgctg ctggaccgat tgctatttta tgtgtcactt 120  
 gagagaaaac agttaataa aaactaattt aatacaaaat ttagctgggc ttggtggcac 180  
 atgcctgtaa tcccagctac tcgggaggct gaagcaggag agttgcttga acctgggagg 240

cgtagattgc	agtgagccaa	gatcatccca	ctgcaactcca	gcctggggcga	cagagtgaga	300
cacagtctca	aacaaaaacaa	aacaaaaagg	aatttagagt	agcccatggg	gtagctatgc	360
ttaccaacat	ccagtgggat	ccccgtggat	tctccctacc	cctttttaag	aggattgttg	420
ctaccttcta	gggctccgtt	tacagggatc	actgatttct	cagtcacgaa	gaacaaaatt	480
atccagcttt	gcttggacct	gaccactaca	gtccagaagg	attgctttgt	agcggaaatg	540
gaggataaa	ttttaactgt	ggtcaagggt	ttaaatggca	tctgtgacaa	aacaatccga	600
tctaccacag	atcctgtgat	gagccagtgt	gcatgtctgg	aggaagttca	cttaccaaac	660
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 <213> Homo sapiens  
  
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 20 25 30  
 Cys Leu Glu Val His Leu Pro Asn Ile Lys Pro Gly Glu Gly Leu  
 35 40 45  
 Gly Met Tyr Ile Lys Ser Thr Tyr Asp Gly Leu His Val Ile Thr Gly

50	55	60
Thr Thr Glu Asn Ser Pro Ala Asp Arg Ser Gln Lys Ile His Ala Gly		
65	70	75
Asp Glu Val Ile Gln Val Asn Gln Gln Thr Val Val Gly Trp Gln Leu		80
	85	90
Lys Asn Leu Val Lys Lys Leu Arg Glu Asn Pro Thr Gly Val Val Leu		95
	100	105
Leu Leu Lys Lys Arg Pro Thr Gly Ser Phe Asn Phe Thr Pro Ala Pro		110
	115	120
Leu Lys Asn Leu Arg Trp Lys Pro Pro Leu Val Gln Thr Ser Pro Pro		125
	130	135
Pro Ala Thr Thr Gln Ser Pro Glu Ser Thr Met Asp Thr Ser Leu Lys		140
	145	150
Lys Glu Lys Ser Ala Ile Leu Asp Leu Tyr Ile Pro Pro Pro Pro Ala		155
	165	170
Val Pro Tyr Ser Pro Arg Asp Glu Asn Gly Ser Phe Val Tyr Gly Gly		175
	180	185
Ser Ser Lys Cys Lys Gln Pro Leu Pro Gly Pro Lys Gly Ser Glu Ser		190
	195	200
Pro Asn Ser Phe Leu Asp Gln Glu Ser Arg Arg Arg Arg Phe Thr Ile		205
	210	215
Ala Asp Ser Asp Gln Leu Pro Gly Tyr Ser Val Glu Thr Asn Ile Leu		220
	225	230
Pro Thr Lys Met Arg Glu Lys Thr Pro Ser Tyr Xaa Lys Pro Arg Pro		235
	245	250
Leu Ser Met Pro Ala Asp Gly Asn Trp Met Gly Ile Val Asp Pro Phe		255
	260	265
Ala Arg Pro Arg Gly His Gly Arg Lys Gly Glu Asp Ala Leu Cys Arg		270
	275	280
Tyr Phe Ser Asn Glu Arg Ile Pro Pro Ile Ile Glu Glu Ser Ser Ser		285
	290	295
Pro Pro Tyr Arg Phe Ser Arg Pro Thr Thr Glu Arg His Leu Val Arg		300
	305	310
Gly Ala Asp Tyr Ile Arg Gly Ser Arg Cys Tyr Ile Asn Ser Asp Leu		315
	325	330
His Ser Ser Ala Thr Ile Pro Phe Gln Glu Glu Gly Thr Lys Lys Lys		335
	340	345
Ser Gly Ser Ser Ala Thr Lys Ser Ser Ser Thr Glu Pro Ser Leu Leu		350
	355	360
Val Ser Trp Phe Thr Arg Leu Lys Leu Leu Thr His		365
	370	375
		380

<210> 284  
 <211> 1789  
 <212> DNA  
 <213> Homo sapiens

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<210> 285  
 <211> 335  
 <212> PRT  
 <213> Homo sapiens

<400> 285

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Leu	Ala	Phe	Gly	Ala	Ser	Tyr	Gly	Thr	Gly	Gly	Arg	Met	Met	Asn	Cys
			20					25					30		
Pro	Lys	Ile	Leu	Arg	Gln	Leu	Gly	Ser	Lys	Val	Leu	Leu	Pro	Leu	Thr
		35					40					45			
Tyr	Glu	Arg	Ile	Asn	Lys	Ser	Met	Asn	Lys	Ser	Ile	His	Ile	Val	Val
	50					55					60				
Thr	Met	Ala	Lys	Ser	Leu	Glu	Asn	Ser	Val	Glu	Asn	Lys	Ile	Val	Ser
65					70					75					80
Leu	Asp	Pro	Ser	Glu	Ala	Gly	Pro	Pro	Arg	Tyr	Leu	Gly	Asp	Arg	Tyr
				85					90				95		
Lys	Phe	Tyr	Leu	Glu	Asn	Leu	Thr	Leu	Gly	Ile	Arg	Glu	Ser	Arg	Lys
			100					105					110		
Glu	Asp	Glu	Gly	Trp	Tyr	Leu	Met	Thr	Leu	Glu	Lys	Asn	Val	Ser	Val
		115					120					125			
Gln	Arg	Phe	Cys	Leu	Gln	Leu	Arg	Leu	Tyr	Glu	Gln	Val	Ser	Thr	Pro
130					135						140				
Glu	Ile	Lys	Val	Leu	Asn	Lys	Thr	Gln	Glu	Asn	Gly	Thr	Cys	Thr	Leu
145					150					155					160
Ile	Leu	Gly	Cys	Thr	Val	Glu	Lys	Gly	Asp	His	Val	Ala	Tyr	Ser	Trp
			165						170					175	
Ser	Glu	Lys	Ala	Gly	Thr	His	Pro	Leu	Asn	Pro	Ala	Asn	Ser	Ser	His
			180					185					190		
Leu	Leu	Ser	Leu	Thr	Leu	Gly	Pro	Gln	His	Ala	Asp	Asn	Ile	Tyr	Ile
		195					200					205			
Cys	Thr	Val	Ser	Asn	Pro	Ile	Ser	Asn	Asn	Ser	Gln	Thr	Phe	Ser	Pro
210					215							220			
Trp	Pro	Gly	Cys	Arg	Thr	Asp	Pro	Ser	Glu	Thr	Lys	Pro	Trp	Ala	Val
225					230					235					240
Tyr	Ala	Gly	Leu	Leu	Gly	Gly	Val	Ile	Met	Ile	Leu	Ile	Met	Val	Val
			245						250					255	
Ile	Leu	Gln	Leu	Arg	Arg	Arg	Gly	Lys	Thr	Asn	His	Tyr	Gln	Thr	Thr
			260					265					270		
Val	Glu	Lys	Lys	Ser	Leu	Thr	Ile	Tyr	Ala	Gln	Val	Gln	Lys	Pro	Gly
		275					280						285		
Pro	Leu	Gln	Lys	Lys	Leu	Asp	Ser	Phe	Pro	Ala	Gln	Asp	Pro	Cys	Thr

290                      295                      300  
 Thr Ile Tyr Val Ala Ala Thr Glu Pro Val Pro Glu Ser Val Gln Glu  
 305                      310                      315                      320  
 Thr Asn Ser Ile Thr Val Tyr Ala Ser Val Thr Leu Pro Glu Ser  
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<210> 286  
 <211> 305  
 <212> PRT  
 <213> Homo sapiens

<400> 286  
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 Leu Ala Phe Gly Ala Ser Tyr Gly Thr Gly Gly Arg Met Met Asn Cys  
                     20                      25                      30  
 Pro Lys Ile Leu Arg Gln Leu Gly Ser Lys Val Leu Leu Pro Leu Thr  
                     35                      40                      45  
 Tyr Glu Arg Ile Asn Lys Ser Met Asn Lys Ser Ile His Ile Val Val  
                     50                      55                      60  
 Thr Met Ala Lys Ser Leu Glu Asn Ser Val Glu Asn Lys Ile Val Ser  
 65                      70                      75                      80  
 Leu Asp Pro Ser Glu Ala Gly Pro Pro Arg Tyr Leu Gly Asp Arg Tyr  
                     85                      90                      95  
 Lys Phe Tyr Leu Glu Asn Leu Thr Leu Gly Ile Arg Glu Ser Arg Lys  
                     100                      105                      110  
 Glu Asp Glu Gly Trp Tyr Leu Met Thr Leu Glu Lys Asn Val Ser Val  
                     115                      120                      125  
 Gln Arg Phe Cys Leu Gln Leu Arg Leu Tyr Glu Gln Val Ser Thr Pro  
                     130                      135                      140  
 Glu Ile Lys Val Leu Asn Lys Thr Gln Glu Asn Gly Thr Cys Thr Leu  
 145                      150                      155                      160  
 Ile Leu Gly Cys Thr Val Glu Lys Gly Asp His Val Ala Tyr Ser Trp  
                     165                      170                      175  
 Ser Glu Lys Ala Gly Thr His Pro Leu Asn Pro Ala Asn Ser Ser His  
                     180                      185                      190  
 Leu Leu Ser Leu Thr Leu Gly Pro Gln His Ala Asp Asn Ile Tyr Ile  
                     195                      200                      205  
 Cys Thr Val Ser Asn Pro Ile Ser Asn Asn Ser Gln Thr Phe Ser Pro  
                     210                      215                      220  
 Trp Pro Gly Cys Arg Thr Asp Pro Ser Gly Lys Thr Asn His Tyr Gln  
 225                      230                      235                      240  
 Thr Thr Val Glu Lys Lys Ser Leu Thr Ile Tyr Ala Gln Val Gln Lys  
                     245                      250                      255  
 Pro Gly Pro Leu Gln Lys Lys Leu Asp Ser Phe Pro Ala Gln Asp Pro  
                     260                      265                      270  
 Cys Thr Thr Ile Tyr Val Ala Ala Thr Glu Pro Val Pro Glu Ser Val  
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 Gln Glu Thr Asn Ser Ile Thr Val Tyr Ala Ser Val Thr Leu Pro Glu  
 290                      295                      300  
 Ser  
 305

<210> 287  
 <211> 298  
 <212> PRT  
 <213> Homo sapiens

<400> 287  
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Leu Ala Phe Gly Ala Ser Tyr Gly Thr Gly Gly Arg Met Met Asn Cys  
 20 25 30  
 Pro Lys Ile Leu Arg Gln Leu Gly Ser Lys Val Leu Leu Pro Leu Thr  
 35 40 45  
 Tyr Glu Arg Ile Asn Lys Ser Met Asn Lys Ser Ile His Ile Val Val  
 50 55 60  
 Thr Met Ala Lys Ser Leu Glu Asn Ser Val Glu Asn Lys Ile Val Ser  
 65 70 75 80  
 Leu Asp Pro Ser Glu Ala Gly Pro Pro Arg Tyr Leu Gly Asp Arg Tyr  
 85 90 95  
 Lys Phe Tyr Leu Glu Asn Leu Thr Leu Gly Ile Arg Glu Ser Arg Lys  
 100 105 110  
 Glu Asp Glu Gly Trp Tyr Leu Met Thr Leu Glu Lys Asn Val Ser Val  
 115 120 125  
 Gln Arg Phe Cys Leu Gln Leu Arg Leu Tyr Glu Gln Val Ser Thr Pro  
 130 135 140  
 Glu Ile Lys Val Leu Asn Lys Thr Gln Glu Asn Gly Thr Cys Thr Leu  
 145 150 155 160  
 Ile Leu Gly Cys Thr Val Glu Lys Gly Asp His Val Ala Tyr Ser Trp  
 165 170 175  
 Ser Glu Lys Ala Gly Thr His Pro Leu Asn Pro Ala Asn Ser Ser His  
 180 185 190  
 Leu Leu Ser Leu Thr Leu Gly Pro Gln His Ala Asp Asn Ile Tyr Ile  
 195 200 205  
 Cys Thr Val Ser Asn Pro Ile Ser Asn Asn Ser Gln Thr Phe Ser Pro  
 210 215 220  
 Trp Pro Gly Cys Arg Thr Asp Pro Ser Glu Thr Lys Pro Trp Ala Val  
 225 230 235 240  
 Tyr Ala Gly Leu Leu Gly Gly Val Ile Met Ile Leu Ile Met Val Val  
 245 250 255  
 Ile Leu Gln Leu Arg Arg Arg Gly Lys Thr Asn His Tyr Gln Thr Thr  
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 Val Glu Lys Lys Ser Leu Thr Ile Tyr Ala Gln Val Gln Lys Pro Gly  
 275 280 285  
 Asp Thr His His Gln Thr Ser Asp Leu Phe  
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<210> 288  
 <211> 3640  
 <212> DNA  
 <213> Homo sapiens

<400> 288  
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 tgcactggag gagagggttat tttcaaagct ttgtcaccac catacgatac agagaaccct 1080

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acacagtgcc atatgaataa ttccacatac agaacctttt tttctctgaa gtcctgtgga 3540
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<210> 289
<211> 628
<212> PRT
<213> Homo sapiens

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<400> 289
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Ala Ala Gly Leu Ser Gly Val Ala Gly Val Ser Ser Arg Cys Glu Lys
20 25 30
Ala Cys Asn Pro Arg Met Gly Asn Leu Ala Leu Gly Arg Lys Leu Trp
35 40 45
Ala Asp Thr Thr Cys Gly Gln Asn Ala Thr Glu Leu Tyr Cys Phe Tyr
50 55 60
Ser Glu Asn Thr Asp Leu Thr Cys Arg Gln Pro Lys Cys Asp Lys Cys
65 70 75 80
Asn Ala Ala Tyr Pro His Leu Ala His Leu Pro Ser Ala Met Ala Asp

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					85					90					95
Ser	Ser	Phe	Arg	Phe	Pro	Arg	Thr	Trp	Trp	Gln	Ser	Ala	Glu	Asp	Val
		100						105					110		
His	Arg	Glu	Lys	Ile	Gln	Leu	Asp	Leu	Glu	Ala	Glu	Phe	Tyr	Phe	Thr
		115					120					125			
His	Leu	Ile	Val	Met	Phe	Lys	Ser	Pro	Arg	Pro	Ala	Ala	Met	Val	Leu
	130					135					140				
Asp	Arg	Ser	Gln	Asp	Phe	Gly	Lys	Thr	Trp	Lys	Pro	Tyr	Lys	Tyr	Phe
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Ala	Thr	Asn	Cys	Ser	Ala	Thr	Phe	Gly	Leu	Glu	Asp	Asp	Val	Val	Lys
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Asn	Pro	Tyr	Ser	Ala	Lys	Val	Gln	Glu	Gln	Leu	Lys	Ile	Thr	Asn	Leu
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Arg	Val	Gln	Leu	Leu	Lys	Arg	Gln	Ser	Cys	Pro	Cys	Gln	Arg	Asn	Asp
225					230					235					240
Leu	Asn	Glu	Glu	Pro	Gln	His	Phe	Thr	His	Tyr	Ala	Ile	Tyr	Asp	Phe
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Ile	Val	Lys	Gly	Ser	Cys	Phe	Cys	Asn	Gly	His	Ala	Asp	Gln	Cys	Ile
			260					265					270		
Pro	Val	His	Gly	Phe	Arg	Pro	Val	Lys	Ala	Pro	Gly	Thr	Phe	His	Met
		275					280					285			
Val	His	Gly	Lys	Cys	Met	Cys	Lys	His	Asn	Thr	Ala	Gly	Ser	His	Cys
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Gln	His	Cys	Ala	Pro	Leu	Tyr	Asn	Asp	Arg	Pro	Trp	Glu	Ala	Ala	Asp
305					310					315					320
Gly	Lys	Thr	Gly	Ala	Pro	Asn	Glu	Cys	Arg	Thr	Cys	Lys	Cys	Asn	Gly
				325					330					335	
His	Ala	Asp	Thr	Cys	His	Phe	Asp	Val	Asn	Val	Trp	Glu	Ala	Ser	Gly
			340					345					350		
Asn	Arg	Ser	Gly	Gly	Val	Cys	Asp	Asp	Cys	Gln	His	Asn	Thr	Glu	Gly
	355						360					365			
Gln	Tyr	Cys	Gln	Arg	Cys	Lys	Pro	Gly	Phe	Tyr	Arg	Asp	Leu	Arg	Arg
	370					375					380				
Pro	Phe	Ser	Ala	Pro	Asp	Ala	Cys	Lys	Pro	Cys	Ser	Cys	His	Pro	Val
385					390					395					400
Gly	Ser	Ala	Val	Leu	Pro	Ala	Asn	Ser	Val	Thr	Phe	Cys	Asp	Pro	Ser
				405					410				415		
Asn	Gly	Asp	Cys	Pro	Cys	Lys	Pro	Gly	Val	Ala	Gly	Arg	Arg	Cys	Asp
			420					425					430		
Arg	Cys	Met	Val	Gly	Tyr	Trp	Gly	Phe	Gly	Asp	Tyr	Gly	Cys	Arg	Pro
		435					440</								



Thr Cys Pro Ile Leu Asn Pro Gly Leu Glu Tyr Leu Val Ala Gly His  
 580 585 590  
 Glu Asp Ile Arg Thr Gly Lys Leu Ile Val Asn Met Lys Ser Phe Val  
 595 600 605  
 Gln His Trp Lys Pro Ser Leu Gly Arg Lys Val Met Asp Ile Leu Lys  
 610 615 620  
 Arg Glu Cys Lys  
 625

<210> 290  
 <211> 2540  
 <212> DNA  
 <213> Mouse

<400> 290  
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 gtccccctgga cgccgggagcc tcgagccgcg tgcgggcccc gcagctgcta cgcgctcttt 120  
 ccccggcgcc gcacattcct ggaagcttgg cgggcgtgcc gcgaattggg gggcaacctg 180  
 gccacaccgc ggaccccaga ggaggcccag cgtgtggaca gcctgggtgg ggctcgggccc 240  
 gccaacgggc tgctatggat tgggttgcag cggcaggcta ggcaatgcca gccgcagcgc 300  
 ccactgcggg gcttcatatg gaccacggga gaccaggaca ccgccttcac caactgggccc 360  
 cagccgggcta cggaaggacc ctgcccagcc cagcgtgtg cagcccttga ggccagcggg 420  
 gagcatcgct ggctcgaagg ctctgcaca ctggctgtcg atggctacct ctgccagttt 480  
 ggttttgagg gtgcctgccc tgccttgccg cttgaggtgg gtcaggccgg tcccgtgtc 540  
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 aatggggggt gcgaacatga gtgtgtggaa gaggtggacg gtgctgtgtc ctgccgtgc 780  
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 ccctgtgagc agcagtgtga acctggaggg ccacaaggct atagctgcca ctgtcgcctt 900  
 ggcttccggc cagctgagga tgatccacac cgctcgtgg acacggatga gtgccagatt 960  
 gctgggtgtg gccagcagat gtgtgtcaac tatgttgggt gctttgagtg ttactgcagc 1020  
 gagggtcacg agcttgaggc agatggtatc agctgtagcc ctgcaggagc catgggtgcc 1080  
 caggcttccc aggatctcag agatgagttg ctggatgatg gagaagaagg ggaggatgaa 1140  
 gaggagccct gggaggactt tgatggcacc tggacagagg aacaggggat cctatggctg 1200  
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 ccctaccact cctcagtggt gtctgccaca cggcccatgg tgatctctgc cactcgacc 1380  
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 cctccagtc cccctcacct tgatcctggg gataccactt ctaaagccca tcaacacctt 1740  
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 cagccccctc ttctaccaa ctccaggtct tctgtccatg aaactctgt gcctgctgcc 1860  
 aaccagcccc cagccttccc ttcttctccc ctccccctc agaggccac taaccagacc 1920  
 tcatctatca gccctacaca ttctatttcc agagccctc tagtcccaag ggaaggagt 1980  
 ccagctcccaaatcagtgcc acagctgccc tcggtgccc ccacagcagc tccaacagcc 2040  
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 ggacttgctt tggacacatg gctgagacca caccaaggac ttatgggggc tgcccagctg 2400  
 acagaggagg ttctgttctt tgagcccagc atccatggca aaggacacac caggactcca 2460  
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 aaaaaaaaaa aaaaaaaaaa 2540

<210> 291  
 <211> 765

<212> PRT  
<213> Mouse

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<400> 291
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Gly Gln Val Pro Trp Thr Pro Glu Pro Arg Ala Ala Cys Gly Pro Ser
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Ser Cys Tyr Ala Leu Phe Pro Arg Arg Arg Thr Phe Leu Glu Ala Trp
 35      40      45
Arg Ala Cys Arg Glu Leu Gly Gly Asn Leu Ala Thr Pro Arg Thr Pro
 50      55      60
Glu Glu Ala Gln Arg Val Asp Ser Leu Val Gly Val Gly Pro Ala Asn
 65      70      75      80
Gly Leu Leu Trp Ile Gly Leu Gln Arg Gln Ala Arg Gln Cys Gln Pro
 85      90      95
Gln Arg Pro Leu Arg Gly Phe Ile Trp Thr Thr Gly Asp Gln Asp Thr
 100     105     110
Ala Phe Thr Asn Trp Ala Gln Pro Ala Thr Glu Gly Pro Cys Pro Ala
 115     120     125
Gln Arg Cys Ala Ala Leu Glu Ala Ser Gly Glu His Arg Trp Leu Glu
 130     135     140
Gly Ser Cys Thr Leu Ala Val Asp Gly Tyr Leu Cys Gln Phe Gly Phe
 145     150     155     160
Glu Gly Ala Cys Pro Ala Leu Pro Leu Glu Val Gly Gln Ala Gly Pro
 165     170     175
Ala Val Tyr Thr Thr Pro Phe Asn Leu Val Ser Ser Glu Phe Glu Trp
 180     185     190
Leu Pro Phe Gly Ser Val Ala Ala Val Gln Cys Gln Ala Gly Arg Gly
 195     200     205
Ala Ser Leu Leu Cys Val Lys Gln Pro Ser Gly Gly Val Gly Trp Ser
 210     215     220
Gln Thr Gly Pro Leu Cys Pro Gly Thr Gly Cys Gly Pro Asp Asn Gly
 225     230     235     240
Gly Cys Glu His Glu Cys Val Glu Glu Val Asp Gly Ala Val Ser Cys
 245     250     255
Arg Cys Ser Glu Gly Phe Arg Leu Ala Asp Gly His Ser Cys Glu
 260     265     270
Asp Pro Cys Ala Gln Ala Pro Cys Glu Gln Gln Cys Glu Pro Gly Gly
 275     280     285
Pro Gln Gly Tyr Ser Cys His Cys Arg Leu Gly Phe Arg Pro Ala Glu
 290     295     300
Asp Asp Pro His Arg Cys Val Asp Thr Asp Glu Cys Gln Ile Ala Gly
 305     310     315     320
Val Cys Gln Gln Met Cys Val Asn Tyr Val Gly Gly Phe Glu Cys Tyr
 325     330     335
Cys Ser Glu Gly His Glu Leu Glu Ala Asp Gly Ile Ser Cys Ser Pro
 340     345     350
Ala Gly Ala Met Gly Ala Gln Ala Ser Gln Asp Leu Arg Asp Glu Leu
 355     360     365
Leu Asp Asp Gly Glu Glu Gly Glu Asp Glu Glu Glu Pro Trp Glu Asp
 370     375     380
Phe Asp Gly Thr Trp Thr Glu Glu Gln Gly Ile Leu Trp Leu Ala Pro
 385     390     395     400
Thr His Pro Pro Asp Phe Gly Leu Pro Tyr Arg Pro Asn Phe Pro Gln
 405     410     415
Asp Gly Glu Pro Gln Arg Leu His Leu Glu Pro Thr Trp Pro Pro Pro
 420     425     430
Leu Ser Ala Pro Arg Gly Pro Tyr His Ser Ser Val Val Ser Ala Thr
 435     440     445
Arg Pro Met Val Ile Ser Ala Thr Arg Pro Thr Leu Pro Ser Ala His

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450	Lys Thr Ser Val Ile	455	Ser Ala Thr Arg Pro	460	Pro Leu Ser Pro Val His
465	Pro Pro Ala Met	470	Ala Thr Pro Pro	475	Ala Val Phe Ser Glu His
		485	Ala Thr Pro	490	Ala Val Phe Ser Glu His
Gln Ile Pro Lys	Ile Lys Ala Asn Tyr	500	Pro Asp Leu Pro Phe Gly His	505	Pro Asp Leu Pro Phe Gly His
Lys Pro Gly Ile	Thr Ser Ala Thr His	515	Pro Ala Arg Ser Pro Pro Tyr	520	Pro Ala Arg Ser Pro Pro Tyr
Gln Pro Pro Ile	Ile Ser Thr Asn Tyr	530	Pro Gln Val Phe Pro Pro His	535	Pro Gln Val Phe Pro Pro His
Gln Ala Pro Met	Ser Pro Asp Thr His	545	Thr Ile Thr Tyr Leu Pro Pro	550	Thr Ile Thr Tyr Leu Pro Pro
Val Pro Pro His	Leu Asp Pro Gly Asp	565	Thr Thr Ser Lys Ala His Gln	570	Thr Thr Ser Lys Ala His Gln
His Pro Leu Leu	Pro Asp Ala Pro Gly	580	Ile Arg Thr Gln Ala Pro Gln	585	Ile Arg Thr Gln Ala Pro Gln
Leu Ser Val Ser	Ala Leu Gln Pro	595	Leu Pro Thr Asn Ser Arg Ser	600	Leu Pro Thr Asn Ser Arg Ser
Ser Val His Glu	Thr Pro Val Pro	610	Ala Ala Asn Gln Pro Pro Ala Phe	615	Ala Ala Asn Gln Pro Pro Ala Phe
Pro Ser Ser Pro	Leu Pro Gln Arg Pro	625	Thr Asn Gln Thr Ser Ser	630	Thr Asn Gln Thr Ser Ser
Ile Ser Pro Thr	His Ser Tyr Ser Arg	645	Ala Pro Leu Val Pro Arg Glu	650	Ala Pro Leu Val Pro Arg Glu
Gly Val Pro Ser	Pro Lys Ser Val Pro	660	Gln Leu Pro Ser Val Pro Ser	665	Gln Leu Pro Ser Val Pro Ser
Thr Ala Ala Pro	Thr Ala Leu Ala	675	Glu Ser Gly Leu Ala Gly Gln Ser	680	Glu Ser Gly Leu Ala Gly Gln Ser
Gln Arg Asp Asp	Arg Trp Leu Leu	690	Val Ala Leu Leu Val Pro Thr Cys	695	Val Ala Leu Leu Val Pro Thr Cys
Val Phe Leu Val	Val Leu Ala Leu	705	Gly Ile Val Tyr Cys Thr Arg	710	Gly Ile Val Tyr Cys Thr Arg
Cys Gly Ser His	Ala Pro Asn Lys Arg	725	Ile Thr Asp Cys Tyr Arg Trp	730	Ile Thr Asp Cys Tyr Arg Trp
Val Thr His Ala	Gly Asn Lys Ser	740	Thr Glu Pro Met Pro Pro Arg	745	Thr Glu Pro Met Pro Pro Arg
Gly Ser Leu Thr	Gly Val Gln Thr	755	Cys Arg Thr Ser Val	760	Cys Arg Thr Ser Val

<210> 292  
 <211> 3020  
 <212> DNA  
 <213> Mouse

<400> 292	
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cacactctct tgcccacctc tgccaccagt ccacgaagga tgaggaaggg tattggattg	120
tcttgacact cctggaagct agactagggc ctggagcaac gaccggcttt ggactctctg	180
attcagggtc ctccctaaagc tcagagggac aaaaaagagt ccctgcaagt cgtccacggg	240
gctgggagca gccgggtggc tcatgactac tcagagagtc tgcccaaaga aaagagtctt	300
gtattggaaa ggtttctggg tacctgaccg tgttgcgttt gtttctaccc aacgtttaac	360
agagagccca gagccatgat gaagaccttg tccagtggga actgcacact caatgtgcct	420
gctaagaact cctaccgcat ggtggtgctg ggtgcctccc gactgggcaa gagctccatt	480
gtctcccgct tcttcaatgg ccgcttttgag gaccagtaca cgcccactat cgaggacttt	540
catcgcaagg tgtacaacat ccacggggac atgtaccagc tggatattcct ggacacctct	600
ggcaaccacc cattccctgc catgcgcggg ctctccatcc tcacaggaga tgtcttcatc	660
ctgggtgttca gcttgatag ccgggagtc tttgatgagg tcaagcgct ccagaaacag	720
atcctggagg tcaagtcctg cctgaagaat aaaaccaagg aggcagcaga gctgcccatt	780
gtgatctgtg ggaacaagaa tgaccacagt gagctgtgcc gccaggtccc tgccatggag	840
gctgagctgc tgggtgtctgg tgatgaaaac tgcgcctatt tcgaggtgtc agccaagaag	900



Ser Glu Leu Cys Arg Gln Val Pro Ala Met Glu Ala Glu Leu Leu Val  
 145 150 155 160  
 Ser Gly Asp Glu Asn Cys Ala Tyr Phe Glu Val Ser Ala Lys Lys Asn  
 165 170 175  
 Thr Asn Val Asn Glu Met Phe Tyr Val Leu Phe Ser Met Ala Lys Leu  
 180 185 190  
 Pro His Glu Met Ser Pro Ala Leu His His Lys Ile Ser Val Gln Tyr  
 195 200 205  
 Gly Asp Ala Phe His Pro Arg Pro Phe Cys Met Arg Arg Thr Lys Val  
 210 215 220  
 Ala Gly Ala Tyr Gly Met Val Ser Pro Phe Ala Arg Arg Pro Ser Val  
 225 230 235 240  
 Asn Ser Asp Leu Lys Tyr Ile Lys Ala Lys Val Leu Arg Glu Gly Gln  
 245 250 255  
 Ala Arg Glu Arg Asp Lys Cys Ser Ile Gln  
 260 265

<210> 294  
 <211> 5520  
 <212> DNA  
 <213> Mouse

<400> 294

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cgcaggatgc	cgggtgcctcc	cgcgcttttg	ctgctgctgc	cgctgctgcc	ttgtcttctg	180
ctcctggctc	ctggaactcg	gggtgcgcct	ggctgcccgg	tcctatccg	cggttgcaag	240
tgctctgggg	agcggcccaa	gggactaagt	ggcggcgccc	acaaccggc	tcgaaggagg	300
gtggtgtgcg	gcggtgggga	tctccccgaa	cctccagatc	ccggccttct	gccaaacggc	360
accatcacct	tgctcttgag	caacaacaag	attactgggc	tcgcgaatgg	atccttcttg	420
ggactgtccc	tggtggagaa	gttggacctg	aggagcaatg	tcatcagcac	tggtgcagcct	480
ggagccttcc	taggtctggg	agagctaaaa	cgcttagatc	tctccaacaa	tcggattggc	540
tgctcacct	ctgagacatt	tcaagggctc	cctagacttc	tcagactaaa	catatctgga	600
aacatctact	ctagtctgca	acctggggctc	tttgatgagc	tgccagccct	taagattgtg	660
gactttggta	ctgagtttct	gacctgtgac	tgccgcctgc	gctggctgct	gcctggggcc	720
cggaatcact	ccctgcagct	gtctgagcgc	acactctgtg	cctaccccag	tgccctgcac	780
gcccagccc	tgagcagcct	ccaggagctc	cagcttcgct	gtgaaggggc	cctggaactg	840
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cccctagctg	atcagcagct	taggttcgcg	tgaccactg	ggaggcccaa	catttctctg	1920
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gcagctgggc	ctggcaagag	gcgtggtgtg	gccaccccag	tcatatttgc	aggaaccagt	2160
ggctgtggtg	tgggaaactt	gacggagccc	gtggctgtgt	cactgaggca	ctgggctgaa	2220
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<213> Mouse

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<400> 295
Met Pro Val Pro Pro Ala Arg Leu Leu Leu Leu Pro Leu Leu Pro Cys
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 20      25
Pro Ile Arg Gly Cys Lys Cys Ser Gly Glu Arg Pro Lys Gly Leu Ser
 35      40      45
Gly Gly Ala His Asn Pro Ala Arg Arg Arg Val Val Cys Gly Gly Gly
 50      55      60
Asp Leu Pro Glu Pro Pro Asp Pro Gly Leu Leu Pro Asn Gly Thr Ile
 65      70      75      80
Thr Leu Leu Leu Ser Asn Asn Lys Ile Thr Gly Leu Arg Asn Gly Ser
 85      90      95
Phe Leu Gly Leu Ser Leu Leu Glu Lys Leu Asp Leu Arg Ser Asn Val
 100     105     110
Ile Ser Thr Val Gln Pro Gly Ala Phe Leu Gly Leu Gly Glu Leu Lys
 115     120     125
Arg Leu Asp Leu Ser Asn Asn Arg Ile Gly Cys Leu Thr Ser Glu Thr
 130     135     140
Phe Gln Gly Leu Pro Arg Leu Leu Arg Leu Asn Ile Ser Gly Asn Ile
 145     150     155     160
Tyr Ser Ser Leu Gln Pro Gly Val Phe Asp Glu Leu Pro Ala Leu Lys
 165     170     175
Ile Val Asp Phe Gly Thr Glu Phe Leu Thr Cys Asp Cys Arg Leu Arg
 180     185     190
Trp Leu Leu Pro Trp Ala Arg Asn His Ser Leu Gln Leu Ser Glu Arg
 195     200     205
Thr Leu Cys Ala Tyr Pro Ser Ala Leu His Ala His Ala Leu Ser Ser
 210     215     220
Leu Gln Glu Ser Gln Leu Arg Cys Glu Gly Ala Leu Glu Leu His Thr
 225     230     235     240
His Tyr Leu Ile Pro Ser Leu Arg Gln Val Val Phe Gln Gly Asp Arg
 245     250     255
Leu Pro Phe Gln Cys Ser Ala Ser Tyr Leu Gly Asn Asp Thr Arg Ile
 260     265     270
His Trp Tyr His Asn Gly Ala Pro Met Glu Ser Asp Glu Gln Ala Gly
 275     280     285
Ile Val Leu Ala Glu Asn Leu Ile His Asp Cys Thr Phe Ile Thr Ser
 290     295     300
Glu Leu Thr Leu Ser His Ile Gly Val Trp Ala Ser Gly Glu Trp Glu
 305     310     315     320
Cys Ser Val Ser Thr Val Gln Gly Asn Thr Ser Lys Lys Val Glu Ile
 325     330     335
Val Val Leu Glu Thr Ser Ala Ser Tyr Cys Pro Ala Glu Arg Val Thr
 340     345     350
Asn Asn Arg Gly Asp Phe Arg Trp Pro Arg Thr Leu Ala Gly Ile Thr
 355     360     365
Ala Tyr Gln Ser Cys Leu Gln Tyr Pro Phe Thr Ser Val Pro Leu Ser
 370     375     380
Gly Gly Ala Pro Gly Thr Arg Ala Ser Arg Arg Cys Asp Arg Ala Gly
 385     390     395     400
Arg Trp Glu Pro Gly Asp Tyr Ser His Cys Leu Tyr Thr Asn Asp Ile
 405     410     415
Thr Arg Val Leu Tyr Thr Phe Val Leu Met Pro Ile Asn Ala Ser Asn
 420     425     430
Ala Leu Thr Leu Ala His Gln Leu Arg Val Tyr Thr Ala Glu Ala Ala
 435     440     445
Ser Phe Ser Asp Met Met Asp Val Val Tyr Val Ala Gln Met Ile Gln
 450     455     460

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Lys	Phe	Leu	Gly	Tyr	Val	Asp	Gln	Ile	Lys	Glu	Leu	Val	Glu	Val	Met
465					470					475					480
Val	Asp	Met	Ala	Ser	Asn	Leu	Met	Leu	Val	Asp	Glu	His	Leu	Leu	Trp
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Cys Cys Pro Pro Ala Ser Pro Ser Ala Ser His Val Pro Ala Arg Ala						
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Ser Met Gly Gln Ala Ser Pro Glu Ser Lys Gly Phe Thr Asp Leu Leu
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His Asn Tyr Tyr Ile Ser Arg Ile Tyr Gly Pro Ala Asp Ser Ala Ser
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Arg Asp Leu Trp Val Asn Ile Asp Gln Met Glu Lys Asp Lys Val Lys
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Leu Ser Phe Asp Phe Pro Phe Tyr Gly His Phe Leu Asn Glu Val Thr

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 Thr Met Gln Phe Arg Val Leu Thr Thr Thr Arg Arg Ala Val Thr Ser  
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 His Pro Thr Ser Ala Ala Ser Ile Phe Phe Ile Glu Arg Arg Pro Ser  
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 <213> Mouse

<400> 301

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 <213> Mouse

<400> 303

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<211> 1479
<212> PRT
<213> Mouse

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35 40 45
Gly Met Gln Gly Cys Leu Glu Ala Gln Gly Val Gln Val Arg Val Thr
50 55 60
Pro Phe Cys Asn Ala Ser Leu Pro Ala Gln Arg Trp Lys Trp Val Ser
65 70 75 80
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85 90 95
Trp Pro Val Thr Asn Thr Thr Val Ser Leu Gly Met Tyr Glu Cys Asp
100 105 110
Arg Glu Ala Leu Ser Leu Arg Met Ala Val Ser Tyr Thr Arg Gly Pro
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Val Val Pro Ala Ser Gly Gly Ser Cys Lys Gln Cys Ile Gln Ala Trp
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His Leu Trp Cys Ala Thr Thr Gln Asp Tyr Gly Lys Asp Glu Arg Trp
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